



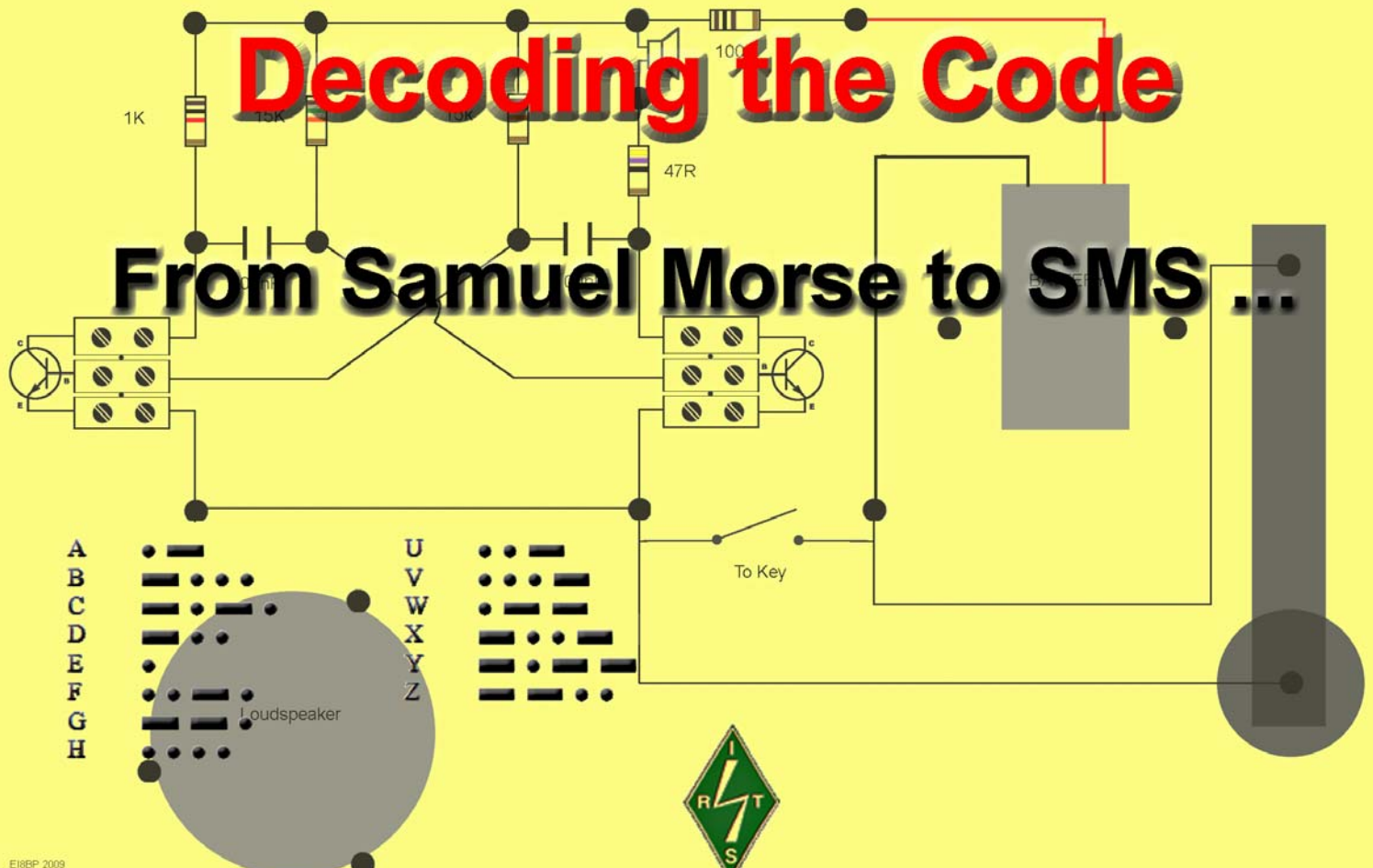
ECHO IRELAND

Journal of the
Irish Radio Transmitters Society
February 2010



Decoding the Code

From Samuel Morse to SMS ...



E18BP 2009



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News Bulletins and Readers

Sunday				
Dublin	1100	7.043	SSB	Colm EI3H, Sean EI7CD, Gerry EI8CC, Roland EI4GYB Ger EI4GXB
Wicklow	1130	3.680	SSB	(as Gaeilge) Paddy EI7GK, Danny EI6GS
Dublin	1145	145.525	FM	Tony EI5EM, John EI7JG
Dublin	1200	3.650	SSB	As 1100
Mayo	2000	145.600	FM	John EI7IQ, Padraic EI9JA, Jimmy EI2GCB
Tipperary	2030	145.450	FM	Tommy EI2IT, John EI2JB, Andy EI5JF
Dublin	2130	145.525	FM	As 1145
Monday				
Cork	2000	145.750	FM	Vincent EI7HN
Limerick	2000	145.725	FM	Brian EI9AL, Tony EI2AW
Louth	2000	145.675		Peter EI4HX, Thos EI2JD
Galway	2000	145.625		Steve EI5DD
Tuesday				
Waterford	2130	145.650	FM	Francis EI5GOB

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 Charlie Carolan EI8JB
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**Newsletter input to
 ei4bz@eircom.net**

Award Nominations

Each year at the Annual General Meeting, the Society presents awards to honour individuals or groups who have provided exceptional service to the hobby or to the Society. These awards are not confined to society members.

Nominations are now invited for these awards and may be from clubs or individuals, must be in writing and can be forwarded to the awards committee by regular post to Peter Grant EI4HX, QTHR or by e-mail to: ei4hxperimental@eircom.net Chairman of the awards sub-committee.

Nominations may also be submitted to either Pat EI2HX or Pat EI9HX members of the awards sub-committee.

Closing date for nominations is April 2nd 2010.

When considering your nominations please refer to previous successful nominees as included in www.irts.ie/cgi/awards.cgi

Entries are also invited for the SWL Trophy and the two home construction trophies. Full details on www.irts.ie

Trophy Returns

The holders of trophies collected at last years Annual General Meeting are asked to arrange their return to Peter Grant EI4HX as soon as possible. They are required for engraving before this years AGM in Dundalk.

Trophies and cups can be returned to the IRTS stand at the Phoenix Radio Rally or to any IRTS Committee Member to arrive to Peter on or before the IRTS committee meeting on March 6th 2010.

Galway VHF Group.

The Galway VHF Group's APRS Digipeater, EI2GCP, has now been fully functional since before Christmas. Initial problems occurred when the power supply failed and put the equipment off air.

The power supply was replaced and there have been no problems in the last 6 weeks despite the adverse weather conditions. EI2GCP even "titters" at intervals to indicate that all is well voltage and temperature wise.

Steve, EI5DD, is running classes for the Radio Theory examination and anyone interested should contact Steve at the following E-mail address ei5dd.steve@gmail.com.

The course will run until the next scheduled exam in June or July. There will be lectures with overhead projections, hand-outs and also a CD Rom for home study and revision.

Next IRTS Committee Meeting

Saturday March 6th at 1100

Maldron Hotel, Portlaoise

Cover:

"Decoding the code" presentations to students will be run by IRTS in conjunction with Engineers Ireland in several centres around the country during the week of February 8th to 12th. Participants will build oscillator kits and learn to send and receive Morse Code.

Cover shows participants from last years event.

Silent Key - Redmond Burke EI5I

We regret to announce the death of Redmond Burke EI5I of Laburnum Park in Cork on December 23rd.

Redmond, while not very active in recent years, was very well known to older amateurs and he had probably the first rotatable HF array in Ireland that attracted many visitors from all over the country to travel to Cork for a viewing.

He was interred in Ballinakill Cemetery, Loughrea on Tuesday January 5th

We extend our deepest sympathy to his wife Evelyn, son and daughters and extended family.



Jimmy Porter GI3GGY a radio ham for over 70 years, recently was featured in a radio programme with Paul Moore on Radio Ulster.

Jimmy is well known as a reader of the RSGB news on 40 metres for over 50 years.

Lough Erne Amateur Radio Club

Lough Erne Amateur Radio Club's third Foundation course is full, with 18 students signed up for the weekends 6 & 7 and 20 & 22 February in SHARE, also venue for the Club's annual rally on Sunday 11 April, where these new amateurs will be looking to buy suitable rigs.

The 18 include 3 SHARE Volunteers, 4 women, and 2 from the previous course cut short by the sad death of the late Club Chairman and Instructor, Edmund Richie GI8LDM. They range in age from teenage to almost 80 years. 8 are already LEARC members or wives and children of members. The Club anticipates that most if not all on the course will join Lough Erne ARC.

This is the largest course intake since the early days of the Club. Fermanagh's first course was in 1976 and intakes in the early 1980s were large, though not all stayed the course to get the then CGLI qualification.

Today's team of about ten Club members instructing, helping with practical work and running the examination, include some who themselves got into amateur radio through those historic courses back in the 1980s.

The Club's March programme includes on-air and other opportunities for these new amateurs and Club members, followed by April's rally as a place to meet many others in amateur radio from North and South, not to mention browsing for the best bargains for radio beginners.

World Thinking Day on the Air

(TDOTA) takes place on February 20-21 and this year UK amateur radio stations may use the special prefix **GG100** in celebration of 100 years of Guiding.

TDOTA is an opportunity for the members of the Guide Associations to talk to other members of the World Association of Girl Guides and Girl Scouts all over the world via Amateur Radio.

The first TDOTA (also known as Guides On The Air - GOTA) was held in 1985 to celebrate 75 years of Guiding in Canada, U.K, New Zealand, and Australia.

Guides On The Air

<http://www.guides-on-the-air.co.uk/>

Facebook Page for Firefighters and Amateur Radio Operators

It is restricted to amateur radio operators that are fire-fighters and/or EMT/Paramedics.

The purpose of the page is to foster a tighter bond between the worldwide fire service and amateur radio.

I hope that by increasing the awareness between the two, we might be able to have a ham shack in every fire brigade/firehouse in the world as a dependable backup for the dispatch radios. The FCC has allowed emergency first responders to use the amateur frequencies as a secondary means of communications but only if they are first licensed amateur radio operators.

Jeff W8JSA

2008 issues of Scatterpoint now online

The UK Microwave Group (UKuG) has now placed all of the 2008 issues of their newsletter Scatterpoint in the public domain.

They can be downloaded along with issues from previous years by anyone (UKuG member or not) from <http://www.scatterpoint.org/>

UKuG's policy is to reserve the current year's issues for members only.

It is hoped that this archive will be a source of useful amateur microwave information for all and that many of you who are not yet members of the Group will consider joining via the UKuG website. UK Microwave Group (UKuG) <http://www.microwavers.org/>

IRTS AGM Weekend in Dundalk

April 24/25th 2010

Theory Classes

Region 4

15 candidates are attending radio theory classes on Wednesdays at the Limerick Institute of Technology.

Classes start at 1900 in room 3B.04 and anyone looking for further information should contact Ger McNamara EI4GXB on 087-2532512 ei4gxb@gmail.com or QTHR.

Dundalk

Contact: Thos Caffrey EI2JD

Tel: 087 2953256

Email: thoscaffrey@hotmail.com

Galway

Contact: Steve Wright EI5DD

Tel: 087 2451218

Email: ei5dd.steve@gmail.com

Crossakiel

The club meets in the Welcome Wagon in Crossakiel every Wednesday 2000.

Email: info@crossakiel.com

South Dublin Radio Club

Club meetings and radio theory classes are held every Tuesday night from 8 to 10pm in a classroom at Terenure College. www.southdublinradioclub.ie

Email: dan@post.com

Echo Ireland as PDF.

If you would like to receive Echo Ireland by way of electronic download, and so help to reduce the Society's postage bill, please advise the Membership Records Officer.

Include your call sign and email address in the request, and send it to:

memrecords@irts.ie

Radio News Deadline Noon on Thursdays

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charlie.carolan@gmail.com.

or newsteam@irts.ie

**or by phone to:
087-6265418**

GEARS Name Change

The Glengormley Electronics & Amateur Radio Society has changed its name its name to the Greenisland Electronics & Amateur Radio Society.

Newsletter input to

ei4bz@eircom.net

Irish Radio Transmitters Society

The Shop



**10% discount for IRTS members
on Amateur Radio Books**

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Wicklow Radio Club

Following their first successful meeting, it is hoped at the next meeting to have a station set up to receive digital modes for a demo. There is a request that if anyone is familiar with Digi modes and can provide an introduction on the night it would be much appreciated. Further plans are also being made for Contest and Field Day participation, as well as activating the rare square that Wicklow Lighthouse is located in with 6m activity also planned in the summer. The Next meeting is scheduled for Wednesday Feb 10th at 19:30 in the Glebe National School, Wicklow Town. All are welcome to attend.

New CW Club

Essex CW Amateur Radio Club is a new club with a difference... it is for CW only.

This new club was formed late last year by a small group of enthusiastic CW operators who wish to see the continued use of Morse Code together with all its advantages for world wide communications.

Essex CW Amateur Radio Club is affiliated to the RSGB and the club call is G1FCW.

Further information can be obtained from the club's website: <http://www.essexcw.org.uk>

Vibroplex Taken Over

Scott Robbins, W4PA, of Knoxville, Tennessee, has signed an agreement to purchase The Vibroplex Company, Inc from present owner Felton 'Mitch' Mitchell, W4OA, effective December 21, 2009.

Vibroplex will move from its present location in Mobile, Alabama to Knoxville, Tenn.

Robbins - who has been employed with Ten-Tec Inc since 1995 (he has been Product Manager for Ten-Tec's Amateur Radio equipment line since 1997) - will leave his position in mid-December to take over full-time management and ownership of Vibroplex during the last two weeks of December, with a planned opening date of January 5, 2010.

Phone numbers email & contact addresses will remain in continuous operation under the new ownership of Vibroplex

Shannon Basin Radio Club Annual General Meeting



Back Row: left to right are Tom (SWL), Richard EI5GUB, Brian EI8IU, Enda EI2II, Fergus EI6IB, Anthony EI6GGB, Mike EI4AL, George EI7GKB, Michael EI2EO
Front: Left to right: Tony EI6DL, Fr Niall EI4CF, Mickey EI5EAB.



Fergus EI6IB operating EI2SBC/p at the Autumn 2m counties contest in Longford.

The following committee was elected. at the AGM on Friday December 11th.

Chairman:	Pat EI9HX
Secretary:	Brian EI8IU
Treasurers:	Fergus EI6IB and Brian EI8IU
QSL Manager:	Mickey EI5EAB

Thanks are extended to the outgoing committee.

Anybody wishing to join the club can contact any of the above members.

All information is on qrz.com.

The club meets monthly on the first Wednesday in the Hannon's Hotel in Roscommon

IRTS AGM - Limerick 1972

Pictures Paul O'Brien EI4CM/K1CM



Eoin O'Kelly EI6BX, President



Con Hunter EI9V



Bat Masterson EI7BM



Sim Farrelly EI9Y



Pat Timmons EI5CE, Bro. Leo O'Gorman EI3X, Phil Cantwell EI9P.



Bill McIlwaine EI9F, Sean Nolan EI7CD, Bill Mannion EI303, now EI5CL



Bill MacIllwain EI9F reading the IRTS News



Irish Radio Transmitters Society

AGM Weekend



Presented by

Dundalk Amateur Radio Society

Fairways Hotel, Dundalk, Co. Louth

Saturday 24th April - IRTS Dinner, 8pm

(Tickets from IRTS committee members €35)

Sunday 25th April - Radio Rally

Doors open 11:00 am Adm. €5.00

IRTS AGM 14:00



Radio Rally

- All the top Traders
- Astronomy Ireland
- Irish Army Comms.
- CTI Computers
- Bring 'n' Buy
- Raffle
- CW Testing



Attractions

- De Lorean sports cars
- AREN
- Coast Guard
- Fire Brigade
- Veteran Car Club
- Dundalk FM 100

DXCC Card Checking Available

So bring your cards!

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For more info visit www.ei7dar.com



HF Happenings

with Dave Deane EI9FBB

This is my first opportunity to wish you all a happy 2010 and although a few weeks into the New Year, I'm delighted to be able to publish Joe (W1JR's) famous end of year review.

This proved very popular last year and summarises the whole year's happenings and events thoroughly. Imagine the time and effort that has to go into something like this, so, we thank him for allowing us to re-publish his pages here.

The first few weeks of 2010 were a little too quiet for our liking, however it is easy for us armchair DXers to complain from the comfort of our own cosy shacks.

Not too many DXpeditions have been gracing the bands so far this year, but, the good news is that from February onwards, will see more activity in this regard as things get somewhat back to normal.

A surprise increase in sunspot activity is most welcomed, as at time of print, we now have a daily sunspot count. Let's hope that 2010 will yield more of these so the higher bands can start buzzing again. 160m to 30m are still the bands of choice for the next 2 months probably; however, the other higher bands *WILL* be open at various times so are worth checking regularly. This is the perfect chance for those to concentrate on building their scores towards some of the other various awards, e.g. WAS, WAZ, etc.

While not chasing those elite DXpeditions or trying to fill in those missing band/mode slots towards DXCC, perhaps one could try to work a few more US States for their W.A.S. award or try to work a new zone or two for example. The list is endless and there is always something on to keep all you award chasers entertained out there. Maybe make that your last minute New Year's resolution?

Anyway, onto Joe's end of year report to put 2009 to an official end!

2009 DXCC Year End Review By W1JR, Joe Reisert

DX wise, the year 2009 was very similar to what we experienced in 2007 and 2008. There were approximately 284 DXCC entities activated during 2009, about 10 fewer than in 2008. Unfortunately several DXpeditions were delayed (hopefully only into 2010), had to be cancelled or were thwarted from

operating for one reason or another. CW still did not die since there were at least 255 entities active on CW but fewer than in 2008. Many stations with no code licenses, especially outside the USA, have been operating on CW and some have shown great CW skills.

One side effect is that we are seeing much more "599 TU" operations with not as much skill to copy other information. Some now say that we have developed a group of computer "code readers." At the same time, some SSB operators have noticed an increase in activity, especially during SSB contests.

The solar minimum first promised for October 2007 and then August 2008 turned out to be incorrect. Despite some recent small sunspots from the upcoming Solar Cycle 24, propagation hasn't really taken off.

According to NOAA, it now looks like the Solar Minimum occurred in December of 2008. NASA is now using a new technique called helioseismology to monitor the solar jet stream which is believed to cause sunspots (http://science.nasa.gov/headlines/2009/17jun_jetstream.htm). They say the stream is delayed which portends that the start of Solar Cycle 24 will be later and hence shorter lived with a lower peak (probably less than 90 sunspots) peaking in May 2013. We hope that the long delay doesn't mean we will be having another Maunder Minimum! Only time will tell if we are finally going to see improved HF propagation.

Very few solar disturbances occurred in 2009. A small disturbance occurred at the end of March, another at the end of October during the DX contest, and a larger one starting in mid-December. Ironically the later didn't noticeably improve propagation. The solar flux, the main propagation indicator on the higher bands, stayed mainly at 70 or below all year. In fact most of July, August and September saw one of the quietest Suns in over 90 years with A=66 on August 9th!

In early and late December, we experienced an A=0 and K=0 on several days. I have never seen this happen before. However, the solar flux reached 88 on December 17th, the highest level since December 2006. When there are so few sunspots and low solar flux, good DX

propagation is still mainly confined to the lower HF bands. Check the daily propagation reports at <http://www.dx.qsl.net/propagation/> or the weekly ARRL Propagation Bulletins by Tad Cook, K7RA. Since official sunspot numbers are a moving index that is 9 months after the fact, the waiting game for Solar Cycle 24 to take off goes on!

Despite the lack of significant sunspots, there was still plenty of DX activity in 2009 albeit mostly concentrated on 160 through 17 metres.

160 Metres seems to be getting lots of DX activity but possibly at the expense of 80 Metres which does become active during contests. Several more entities have received permission to operate on 60 Metres bringing the total users almost to DXCC level.

40 Metres is still the night time breadwinner. The expansion of this band from 7100 to at least 7200 KHz for many of the worlds entities has generated lots more activity, especially during contests. 30 Metres is becoming very popular, sometimes being open 24 hours a day. 20 Metres is still the daytime breadwinner although 17 Metres is sharing some of the load.

During this year 10, 12 and 15 Metres were spotty at best and then mostly only on the North/South or skewed paths.

Some sporadic E propagation especially during June, July and December did enhance HF DX somewhat but this was not due to increased sunspots.

Equipment and operating techniques are still improving especially in the area of dynamic range and low noise receiving antennas on the lower bands. Newly manufactured equipment can often be upgraded by the manufacturers offering software updates via the Internet not only for transceivers but antennas, rotator controls, logging programs etc. New equipment offerings were few this year except for some panadaptors, speech processors and improved antennas such as the 43 foot vertical for multi-band operation. In particular there was a rise in the use of SDR (software defined radios) which thrive on software updates. Even some instrumentation such as the new Array Solutions VNA-2180 Vector Network Analyzer, a new powerful measurement

(Continued on page 9)

(Continued from page 8)

tool, can be updated on the Internet. Of course, software, especially logging programs is constantly being modified or improved.

Internet use and abuse by amateurs continues to increase especially for spotting clusters. The DX clusters are an amazing tool for finding and spotting rare DX. One popular one is "DX Summit." Clusters are a far cry from the way we used to spot DX using either the telephone, spotting frequencies on HF or VHF repeaters. However, there are several downsides. All too often incorrect or extremely rare callsigns (not on the air at the time!) are spotted. A rare callsign can cause a huge pileup that may even cover up the DX station. Listen before you call to be sure it is the right station and especially if there are special instructions such as listening UP!

In these days of seldom signing callsigns, never reply solely on the accuracy of the spot as you may receive a NIL (Not in Log) to your QSL request. During 2009 there were often two or more DXpeditions operating simultaneously and often pileups coincided or overlapped. Also don't post spots with bragging or QSY request addendums. No one cares and in the case of DXpeditions, they seldom are continuously connected to the clusters so they usually don't see your spot!

Many DX stations, especially the large scale DXpeditions now update their logs on the Internet during their operation. One of the most active Internet activities in 2009 was the use of the ARRL Log Book of the World. This was spurred on by the introduction of the ARRL "Triple Play Award" which was completely awarded on the basis of LoTW entries. Also, several of the large 2009 DXpeditions also put their logs directly into the LoTW. There are now over 250 million LoTW QSO entries and over 35,000 LoTW users, an increase of almost 25% over 2008! Most major contest logs and some awards now have to be submitted via the Internet.

Operating techniques are always changing. Split frequency operation, especially by DXpeditions has its own problems. Often calling stations are not aware of the split and QRM the DX. During several of this year's major DXpeditions I carefully monitored the DX station frequency. Often someone would hear this relatively clean frequency, jump right in, hear the

DX station giving reports, imagined that they had a QSO and with impeccable timing would hear the DX station say TU and think they had a valid QSO!

It goes without saying that if you aren't copying the DX station well enough to have a valid QSO or aren't aware of what technique is being used by the DX station, DON'T CALL! This is a good reason to check logs if they are posted on the Internet rather than receiving back a NIL reply to your QSL request. However, this doesn't mean that we should call continuously and later check the internet hoping to see if your callsign is in the log!

Also, there are the usual problems with "frequency policemen". If you can't refrain from saying something to the interfering stations, drop in a SHORT reminder like UP. Sending a long string of UP UP UP UP UP etc. or calling a station a lid often does more harm than good and often QRMs the DX station. Of course, obscenities are NEVER appropriate. Also, try not to rag chew on frequencies frequented by rare DX. 3.795, 14.195 and 14.260 (IOTA) MHz are just a few frequencies that come to mind. You may not hear the DX station but transmitting on those frequencies will make it difficult for others that are experiencing better propagation than you are.

Many pirate operations showed up in 2009 using existing or unlicensed callsigns. 3W2BV, 3Y0Q, C31LJ/M, HV3VO, JW4JLK, OD5GR, OY2JT, R1FJA/P, TK0M, TU2FQ (on CW), Y1ISR, Y11HR, Y11HRP, ZD9BNA, ZD9HP, ZK3T, ZL5SP, ZL9C, and ZL9AI are just a few that come to mind. Some stations using YU8 callsigns were also observed but most of them were in located in Serbia, not Kosovo. Those that were QRV from Kosovo during 2009 were YU8/IW0HEU, YU8/HB9BF and YU8/HB9EKC. Likewise, some recent operations are still not accepted by ARRL such as 5N/LZ1QK and 9Q/DK3MO. 4U1AIDS operated from Switzerland and does not count the same as 4U1ITU. Also some DXpedition callsigns were even pirated during their operation. WFWL (work first, worry later) these stations but this does little good if they are a pirate so sending a QSL is a waste of time and money.

There were a few major DX items of interest in 2009. One of the biggest surprises was when the ARRL Desk was able to certify that the 7O1YGF operation

in 2000 was valid. Furthermore, 7O1YGF QSLs are still available and their logs were placed on the LoTW!

Other highlights were the K5D operation from Desecheo Island and K4M from Midway Island, areas that have restricted access and require special permission from the U. S. Fish and Wildlife Service (USFWS). Let's hope that these superb operations and the work of the KP1-5 Project will yield future operations from other restricted areas, especially KP1, Navassa Island!

FT5GA was finally operational after a long delay. Big disappointments this year were surely the very limited operation of ZS8T from Marion Island (only 85 QSOs) and FT5WO from Crozet Island.

Even though January (with shortened daylight for those in the Northern Hemisphere) is a tough month for DXers, there were many entities activated.

New Years Day (and this year with a long weekend) usually is a great time for DXing since many semi-rare entities often show up. January activity from semi-rare entities was helped in 2009 by operations from E44M, J5UAP, FW8DX, JD1BMM (M/T), VP8DIF (SGA) and a large group of YLs from the Falkland Islands. TS7C was also active and apparently set a new RTTY world record with over 12,000 QSOs.

I'd estimate that 200-210 DXCC entities were activated during January, about 10-20 less than in the same period in 2008. With some luck and good propagation a very active well equipped DXer could have worked 180-190 DXCC entities.

February was also a very good month for DXers with 160 metres still yielding some very good DX and 17 metres improving. 3B7FQ, FH/G3SWH, FP/KV1J, FW5RE, several HVs, PS0F (F/N), S79JF, T27A, TN5SN, and TT8SK activated some semi-rare entities. A French group activated several Antarctic area entities. However, the biggest excitement was the large scale operation (20 operators!) of K5D from Desecheo Island logging over 115,000 QSOs! If you didn't work them, you probably didn't try!

As the year passed on there were many semi-rare operations. March brought us DXpeditions such as H40FN, VK9AA (C/K), VK9LA (LHI) and VK9GMW (Willis I.).

April followed with 3B9/SP2JMB, YK1BA, and S04R.

May had operations such as 5V7PM,

(Continued on page 10)

(Continued from page 9)

ZK2V (who activated 60 Metres for the first time), and 7P8R. DX tends to slow down in the middle of the year as the Northern Hemisphere experiences longer daylight.

Regardless of the time of year, June gave us S92LX, TZ6EI and 5J0BV (HK0A), the latter two were both also on 6 Metres. July had another group operating both 3DA0 and 7P8. August saw operations from OJ0 (Market Reef) and 4W6AL.

DX typically increases as we move into the later third of the year when days shorten in the Northern Hemisphere. September saw activity with FO/A, T2, T30, ZL7 and finally FT5GA from the long delayed very rare Glorioso Islands. The later was a military working group on a mission so operations had to be in their spare time. However, over 50,000 QSOs were still made on all DX bands and the logs were posted on the Internet and LoTW.

October was a confusing month with several DXpeditions all operating at the same time including FT5GA.

3D20CR activated Conway reef and there were operations from FO/M and PY0T. After overcoming operating permission and several transportation problems, there was a shortened operation from Midway Island by K4M. They still managed to exceed 60,000 QSOs and made over 2,600 QSOs on 160 Metres. November saw operations from A25, CE0Y, T30, and VK9X. Also active was TX3A from Chesterfield Island making almost 37,000 QSOs between fishing and diving! The later, a two man DXpedition, emphasized the lower bands and uploaded all their logs on the Internet as well as LoTW while still on the Island! December ended the year with operations from 5T, C56, CE0Z, J5 and SV2ASP/A.

And now the Drum Roll please. Those entities that were *NOT* believed to have been active during 2009 are as follows:

Africa (16): 3C0, 3C, 3X, 3Y/B, 5A, 5U, 9X, D6, E3, FR/J, FR/T, FT/X, FT/Z, T5, VK0/H, and ZD9.

Antarctica (1): 3Y0 (Peter 1).

Asia (9): 1S, 7O, BS7H, BV9P, EZ, P5, VU4, VU7, and XZ.

Europe (3): 1A0, JX, and R1M (MV Island).

North America (7): CY0, CY9, FO/C, KP1, TI9, XF4 and YV0.

Oceania (13): 3D2/R, KH1, KH3, KH5, KH5K, KH7K, KH8S, T33, VK0/M, VP6/D, ZK3, ZL8, and ZL9.

South America (5): CE0/X, HK0/M, PY0/S, VP8/O, and VP8/Sand.

Note that some rare entities may not be on this list. This is because some operations, however short, were conducted. Examples are 9U1P, E51WL (6 Metres), FT5WO, VK9WBM (6 Metres) and ZS8T (only 85 QSOs) to name a few.

A list of DXCC entities that have been believed to have not been activated in the last 6-10 years are: 3C0, 3Y0/B, 7O, E3, FR/E, FR/T, FT/Z, HK0/M, KH1, KH5K, KP1, P5, and VK0/H.

In addition, there were some short or low QSO total operations from some rare entities such as FT5/W, VK0/M, XZ, ZL9 and ZS8M.

This shows that an avid DXer working hard at DXCC in the last 7-10 years could have been able to make the DXCC Honor Roll.

The list also serves as a guide to those planning DXpeditions to rare entities.

2010 will start with many planned operations. We hope that the excellent cooperation with the USFWS that permitted the recent operation from Desecheo and Midway Islands will help to open the door for operation from other entities such as Navassa Island which has similar environmental restrictions.

2009 operations from D6/F6AML and EZ were scuttled because of licensing problems. Let's hope these issues can soon be resolved.

Among some of the rarer entities rumored upcoming operations in 2010 are 3B9, 3W, 9X, CY0 (delayed from 2009), E4, FH, FO/A, FW, H40, J5, S2, T31, VP8/H, YV0, and ZK3 to name a few.

Others maybe in the planning stages and not yet announced.

The possibility of new entities being added to the DXCC list still exists.

Kosovo may finally obtain all the needed requirements for separate status. The status of PJ (Netherlands Antilles etc.) can change as some of these Dutch Islands may become more independent from the Netherlands but probably not until late 2010 or early 2011.

If so, a few new entities will be created and some will be moved to the "Deleted List." A recent change in the DXCC rules will revert deleted entities to the Deleted List instead of being completely removed

(as if they never existed) as previously ruled in 1998. Hence, the present DXCC active entity list still stands at 338.

Sunspots should surely reappear and Solar Cycle 24 will start to improve propagation on the higher HF bands.

Look for the solar flux to go over 100 with low A (<20) and K (<3) indices. Solar wind below 300 KM per second and dynamic pressure less than 0.5 nPa as show on NOAA Space Weather are also good indicators.

Finally, DX means many different things to many people. Some DXers are only interested in the ARRL DXCC Honor Roll and soon run out of interest and challenges.

Others pursue the never ending ARRL Challenge competition. Some like to chase Islands for the IOTA (Islands on the Air) program by the RSGB.

There are approximately 1200 IOTA Island Groups and many have never been activated so there are lots of challenges. For the last several years, CQ Magazine has reinstituted the year long CQ DXCC Marathon to see who can work the most entities in each calendar year.

This program has a few more challenges by also adding several entities recognized only by CQ Magazine but not on the ARRL DXCC list as well as working all 40 zones.

And there are the never ending DX Contests. There are lots of things to do. Don't let the airways die for lack of activity. Stay active and join the fun.

Best of DX to you in 2010 and here's hoping to see you in the pile ups.

Many thanks to W3UR, W9KNI and K7RA for their valuable inputs to this report.

VP8DMN – Falklands.

At time of writing, VP8DMN have just commenced operations. Michael G7VJR (producer of the marvellous Clublog suite) and Martin G3ZAY from IOTA fame are operating from 21st to 29th January on all bands however, emphasis is on the low bands, CW mostly. One may be quite surprised to find that they are in fact still missing the Falklands on a particular band/mode. At time of writing they are a whopping 599+10 dB on 80m CW and a few EI's have already made it through. Full EI league table will be available for next issue.

All QSOs will be uploaded at the immediate end of operations and for those wishing to QSL the traditional ways, should send via G7VJR.

Most wanted DXCC List.

Results of the 2009 DX Magazine's Most Wanted Countries survey have been published.

The polls opened in September and ran through October 15, 2009.

Fortunately for DXers, but not so for the survey, three "top 25 countries" had DXpeditions taking place during the polling period.

So the results may not be an accurate reflection at this point.

This is not a knock on N4AA, Carl Smith, and The DX Magazine.

I'm just pointing out three major operations took place during the period.

Many DXpeditioners look over the results of this important tool and aim for their next location based upon the results.

The FT5GA Glorioso Island operation took place between September 15th and October 7th. Next it was 3D20CR on Conway Reef which took place between September 30th and October 8th.

And finally it was K4M on Midway Island from October 12th to 19th.

So in next year's survey Glorioso should come down a tad, but not a lot and especially not in the North American Pacific Time Zone where it ranks # 1.

Glorioso still ranks number three in Eastern, Central and Mountain time zones.

Conway and Midway both probably won't be in the top 25 next year.

Below are the top 25 Most wanted countries for 2009.

2009

Rank	PFX	Country
1	P5	North Korea
2	KP1	Navassa Island
3	ZS8	Prince Edward & Marion
4	3Y/B	Bouvet Island
5	7O	Yemen
6	VK0/H	Heard Island
7	FT5W	Crozet Island
8	FT5G	Glorioso Island
9	FT5Z	Amsterdam & St. Paul
10	VP8/S	South Sandwich Islands
11	BS7H	Scarborough Reef
12	VP8/O	South Orkney Islands
13	SV/A	Mount Athos
14	HK0/M	Malpelo Island
15	VK0/M	Macquarie Island
16	FR/T	Tromelin Island
17	ZL9	Auckland & Campbell Is.
18	KH5K	Kingman Reef
19	PY0/S	St. Peter & Paul Rocks
20	KH5	Palmyra & Jarvis
21	FT5E/J	Europa & Juan de Nova
22	KH4	Midway Island
23	KH9	Wake Island
24	3D2/C	Conway Reef
25	BQ9P	Pratas Island

3C0 - Annobon.

Recently it was reported that Spanish operators EA5BYP, Elmo, and EA5KM, Javier, are heading to Annobon (3C0) in April. We now know they plan to be there for 15 days, with the exact dates to be announced within the coming days. Plans are for activity on 1.8 through 28 MHz on CW, SSB and RTTY with an emphasis on the low bands. QSLs will be handled by EA7FTR. A Website is expected to be announced in the near future. Elmo operated from here back in October 2006 as 3C0M so after over 3 years, the demand for this one will be high. 17M will be the best band to work this one from EI. Keep an eye on Elmo's Website at <http://personal.telefonica.terra.es/web/ea5yn/>.

Antarctic Activity Week.

The Seventh Antarctic Activity Week (AAW), the international event to celebrate Antarctica, is February 22-28. Organizers think there may be more activity this year than in previous years and propagation may be better too. More info is on the World Wide Antarctic Program (WAP) site, <http://www.waponline.it/>. Stations planning to participate are listed on <http://www.waponline.it/Default.aspx?tabid=113>.

5N50 - Nigeria.

On January 10th the Federal Republic of Nigeria celebrated 50 years of independence. Starting January 1, 2010 through December 31, 2010 all Amateur Radio operators and club stations from Nigeria can use the special 5N50 (Five November Five Zero) prefix. An award is available for those obtain 10 points during the year. Complete rules can be found at <http://www.dxawards.com/inet2010.htm#NIGERIA>.

German Capital of Culture Award.

In celebration of "Essen and the Ruhr area, capital of culture 2010" special event stations DR2010L, DR2010O and DR2010N will be active until the end of this year.

More information including the rules for a short term award can be found at www.dr2010o.de.

So now folks, that's about all info available for this issue, I'm sure that from now till the next issue, more operations from rare, unusual and exciting places will be announced for the coming year.

Don't forget to participate in some of the various contests, a great way to pick out a few needed ones. Remember, it is these contest stations that often have a huge signal and usually hear very well too!

A lot of emphasis has gone into their station design to enable them to work even the 'little pistols' so it's definitely worth giving them a call.

Just a few web-sites that I'd recommend are listed below. These contain valuable information and are a great reference.

www.dxsummit.fi

www.ng3k.com/Misc/adxo.html

www.dailydx.com

<http://www.sk3bg.se/contest>

<http://dx.qsl.net/propagation/greyline.html>

www.on4kst.info/chat/start.php

Thanks to Bernie W3UR, The Daily DX for allowing information to be extracted for these pages.

Also thanks again to **Joe, W1JR** for allowing us to reproduce his annual end of year review.

Vy 73 till next issue.

de Dave EI9FBB



The Daily DX - is a text DX bulletin that can be sent via e-mail to your home or office Monday through Friday and includes DX news, IOTA news, QSN reports, QSL information, a DX Calendar, propagation forecast and much, much more. With a subscription to The Daily DX you will also receive DX news flashes and other interesting DX tidbits. *Subscriptions are \$49.00 for one year or \$28.00 for 6 months.*



The Weekly DX - is a product of The Daily DX that can be sent weekly to your home or office via e-mail in the form of a PDF (portable document format). It includes DX news, IOTA news, QSN reports, QSL information, a DX Calendar, propagation forecast and graphics. *Subscriptions are \$27.00 for one year.*

Get a free two weeks of The Daily DX or a free sample of The Weekly DX by sending a request to bernie@dailydx.com.

Recessionary Radio

By Ted Crowley EI3CY

Somewhere, sometime, I read that amateur radio in North America enjoyed a massive boost in popularity during the great slump of the 1930s; when the unemployed scavenged through defunct equipment, salvaged parts and constructed their own radio stations.

The old limestone quarries associated with the sugar factory at Mallow are now redundant. They have filled with the purest lime-filtered water and become, uniquely, a thriving breeding ground for rainbow trout.

Admirably, the owner of the quarries is giving the unemployed of the locality free lessons in fly-fishing.

Surely, through the aegis of the IRTS, a similar opportunity has arisen to boost the membership of the society, to help the unemployed and to enable them to become employable.

I've been engaged in recessionary radio all my life. By scavenging I've built an 80 metres CW Tx since Christmas, all 10 watts of it. It cost me nothing.

In the past few weeks I've taken down the limp, saltwater spray-corroded wire antenna and erected a new Marconi quarter wave; much the same as all the aerials I've ever had.

Whatever about the merits of my rig and my improving antenna, my earth system is massive, including hundreds of metres

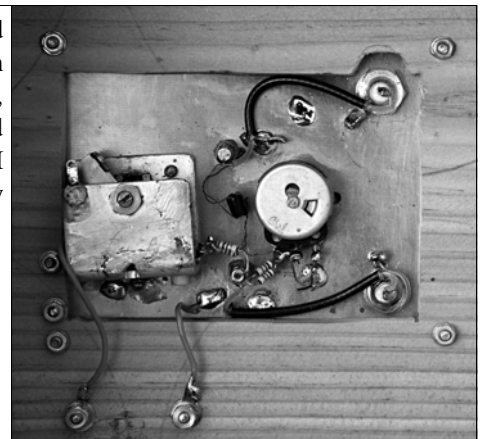
of buried, scavenged old ESB overhead copper cable, an interred immersion heater, a forest of six foot grounding rods, half a kilometre of rusty, multi-strand barbed wire and, if that goes to where I think it goes, the Dublin-Rosslare railway line.

Around Saint Patrick's Day I built an ATU, including an SWR bridge. It works fine, but there's no beating direct connection between the Tx and the antenna, once the impedances are matched they are likely to live happily together ever after.

I designed the Tx to have an output impedance of 50 Ohms. A quarter wave antenna is known to present an input impedance of 40 Ohms at resonance (40 resistive Ohms). A Tx directly connected to an antenna is likely to be a more efficient match than a forced, arranged and inevitably reluctant, loveless marriage through matchmaking ATU.

I've grown more and more disenchanted with ATUs, being, without intending to give offence, the lazy man's load.

From physical measurement I'd reckoned that my new antenna had to be close to a quarter wave at 3.5 MHz. Admittedly, I left it a bit on the long side, because it's easier to chop a bit off than to solder on a bit while dangling from a high chimney. But then, since I'm prone to over-tighten nuts and bolts, to wearing two belts and an arrangement of halyards, blocks and tackles instead of braces, my over-sized antenna proved to be far too long indeed. So I boned up on the Wheatstone bridge, scavenged yet more, and built it.



Once you get your head around it, it is the most marvellous, simple piece of equipment to build and to use. Any radio book worthy of shelf space will tell you all you need to know about the Wheatstone bridge.

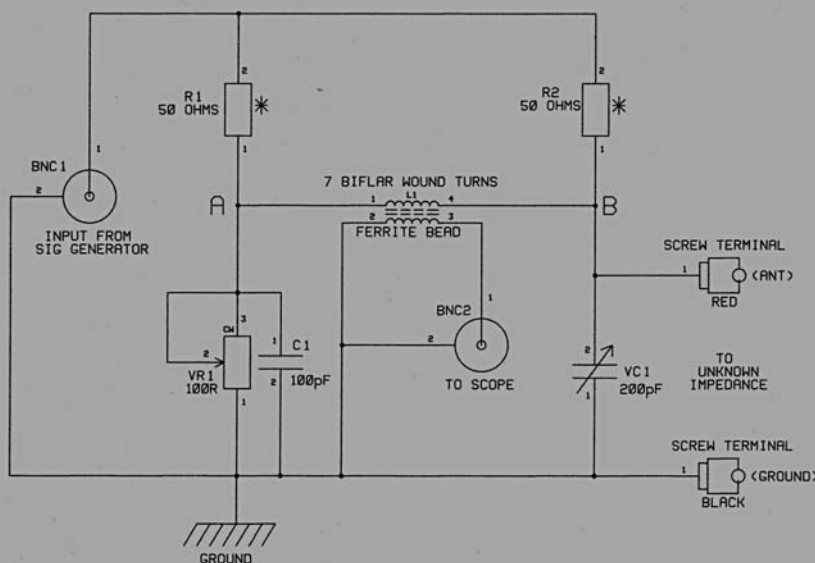
However, there are a few little things about my bridge that renders it suitable to what I had in mind. Each 50 Ohm resistor, R1 and R2, is made of two 100 Ohm 1% resistors in parallel. The pot, VR1, is an old 100 Ohms linear device and gives a nice swing up and down around 50 Ohms.

VR1 straddles R1 and R2 in value and straddles the 40 to 50 Ohms I expected to be measuring. C1, 100 Pf, a close tolerance ceramic capacitor, was chosen to be half the value of VC1, so that, once again, the range of VC1 straddles the value of C1. C1 and VC1 are used to null out inductive or capacitance reactance in the antenna and the setting of VC1 tells whether the antenna is too long (inductive) or too short (capacitive).

L1 is a tiny RF transformer, bifilar wound on a ferrite bead. It couples the voltages appearing at points A and B of the bridge to a scope. Unless you use very thin enamelled wire, have tiny fingers and endless patience, L1 is a little swine to wind.

Pick a ferrite bead with as large a hole as possible, take your time and if seven turns proves impossible to do, rest assured the wire you've chosen is too thick. Ferrite beads are typically 4 to 5 mm long and 3 mm in diameter with a 1.4 mm in diameter hole. The wire I used, successfully on my second attempt, is of 0.12 mm overall diameter.

I hope that my drawing shows how to connect the bridge to the signal generator, the scope and the antenna.



*2X100R IN PARALLEL

WHEATSTONE BRIDGE
de EI3CY 1/5/2009

Not until I swung the signal generator down to 3 MHz did the waveform begin to dip on the scope. This enabled me to calculate that the antenna was 11.5 feet too long.

Ever cautious, I removed 6 feet of antenna and swung the signal generator upwards in frequency. I was getting there, but still with too much wire aloft.

I removed 3 feet and that brought me to the lower outer suburbs of 3.5 MHz.

Afterwards, foot by foot and finally half a foot, I arrived at a resonant frequency of 3.560 MHz, the QRP home of the scavenger. Contrary to theory, the resonant impedance of the antenna is slightly on the high side of 50 Ohms, and of course, being resonant, there is no reactance, so VC1 sits at mid-range, as does VR1.

The ATU is now gone from the antenna path, and gone with it are its two variable capacitors, its tapped inductor and its cross-eyed SWR dual indicators meter and its losses.

The Tx is connected directly to the antenna, and like a pair of teenagers on the Dart, they are, as the say in Dart-speak, "Happily joined at the hip."

And the lovely box?

Scavenged from the local off-licence. The wine it contained was great and the box was even better.

Anyhow, given how old-fashioned a Wheatstone bridge is, it's appropriate to house it in a wooden box.

Incidentally, when one uses wood, but needs screening, scavenged biscuit tins, chopped up and soldered together cost nothing and screen superbly.

Ah, indeed, these are recessionary times and donations of boxed wine and biscuits are welcome at EI3CY.



SOS Radio Week is nine days of fun, non-competitive operating and fund raising by **Radio Amateurs** for the **Royal National Lifeboat Institution (RNLI)**.

It takes place at the end of January to coincide with the **RNLI's own SOS fund raising day**.

Getting involved is simple, regardless of whether you can operate all week, for one day, or just a couple of hours each day - every penny raised makes a big difference to the **RNLI**.

SOS Radio Week has come and gone as you read this.

The Dundalk Amateur Radio Society registered to support the event and to raise awareness for the Clogherhead Lifeboat.

For over 100 years a lifeboat station has provided search and rescue cover for the scenic coastal area around Clogherhead.

The station now operates an all weather Mersey class lifeboat called "The Doris Bleasdale".

In 1899 The RNLI established a lifeboat station and a boathouse with a slipway built on the beach.

The club Chairman Thos EI2JD has family links as his Great Grand Father was the Coxwain of "The Charles Whitten" the very first RNLI Lifeboat in Clogherhead.

Dundalk ARS ran a station throughout the 10 days ending with a 48 hour stint over the last weekend at the QTH of Thos EI2JD, close to the Clogherhead lifeboat station.

At the time of going to print the station had collected through donations and pledges over €200.

Information is on the clubs website www.ei7dar.com where you can find a Donation Button if you want to support this very worthy cause.

Amateur Radio Licence Examination

The society's notes for the amateur radio licence examination have been revised, and a new document "Studying for the Amateur Radio Licence Examination" is now available for download on the downloads page www.irts.ie/downloads of the IRTS web site.

While the Syllabus in Appendix A and the Sample Paper in Appendix B of this document are unchanged, the covering note has been revised and extended. A new section in the covering note outlines why an examination is needed for an amateur radio licence.

In this latest note we have also emphasised the benefit of obtaining practical experience at setting up and operating radio equipment alongside existing licensed radio amateurs either in a club or home environment.

Anyone interested in becoming a radio amateur, and in particular those studying for the radio amateur examination are advised to have a look at this new document.



Contest Corner

by IRTS Contest Manager Thos Caffrey EI2JD

80m Counties Contest Jan 2010.

At the time of going to press there was 40 logs received for the IRTS 80m Counties Contest.

There was a good turn out on the band and everyone seemed to be in good New Year spirit.

This year we found ourselves only one county short of the full 32 and that unfortunately was Kildare.

I was talking recently to Trevor EI2GLB who was all ready to activate Kildare when he had a small emergency and had to leave.

I am delighted to see that more and more entries are using the Super Duper Logging Programme by Paul EI5DI.

You can download this free from www.ei5di.com

Results will be published in the next issue of Echo Ireland.

The next IRTS Contest is the 2m Counties on Easter Monday so lets hope the weather is good for the portable operators. Hope to hear you all in there.

Once again I appeal to clubs, groups and individuals to support the Field Days.

They can be great social occasions and are a great way to get newcomers building aials and making QSOs.

The CW Field Day will be on over the June bank holiday weekend, the 5th and 6th.

The Summer 80m Counties will be held on Sunday June 20th and that's a good opportunity for some portable operation. The VHF/UHF Field Day is on July 3rd and 4th and the SSB Field Day is held on September 4th and 5th.

Another opportunity for portable operation is the MRG Challenge on 2m and 70cms on Sunday September 5th. Now is the time to start forward planning for these events so get going.

Thos EI2JD

UBA Contest SSB 2009

Call	QSOs	Mults	Score
Single Operator All Band Low			
1 EI9HQ	305	85	96,932

UBA Contest CW 2009

Category	Call	QSOs	Mults	Score
A40HP	1 EI6DX	809	53	107,757
(2 nd Place Eu)				

2m Counties Contest Autumn 2009

			Valid QSO's	Counties	Total Score	Location
(A) High Power Portable						
	EI2SBC/P	Shannon Basin Club	53	21	5,922	LON
	EI7T/P	Tipperary Club	39	17	3,417	WAT
(b) Low Power Portable - max 10w						
EI	EI6IQ/P	David Corbett	44	14	2,688	MON
(c) High Power Fixed						
	EI2GLB	Trevor Dunne	48	21	5,061	KIL
	EI4CF	Fr. Niall Foley	39	19	2,869	GAL
	EI2JD	Thos Caffrey	26	10	1,090	LOU
	EI3JD	John Wrafter	15	8	456	OFF
	EI3GYB	Michael Foertig	14	5	175	MAY
(d) Low Power Fixed - max 10w						
	EI9O	Eoin Fagan	24	13	1,391	LON
	EI4HX	Peter Grant	19	10	450	LOU
(E) FM Only -Single Op						
	EI7GY/P	Joe Ryan	20	11	1,100	CAR
	EI4IP/P	Sean Kennedy	25	10	900	MEA
	EI6GGB	Anthony Dolan	16	10	790	ROS
	EI3FFB	Eamonn Kavanagh	18	12	708	TIP
	EI7GBB	Kevin Sandersen	13	9	531	LON
(F) SWL						
	EI1429	Brendan Nutley				
Check logs:						
		EI6EQB, EI5FQB, MI0JBT				

Contest Calendar

All Times UTC

February 2010

13-14	Sat 0000 - Sun 2400	CQ WW RTTY WPX Contest	RTTY
13-14	Sat 1200 - Sun 1200	Dutch PACC Contest	
20-21	Sat 0000 - Sun 2400	ARRL International DX Contest	CW
26-28	Fri 2200 - Sun 2159	CQ 160-Meter Contest	SSB
27-28	Sat 0600 - Sun 1800	REF Contest	SSB
27-28	Sat 1300 - Sun 1300	UBA DX Contest	CW
28	Sun 0900 - Sun 1700	High Speed Club CW Contest	CW

March 2010

6-7	Sat 0000 - Sun 2400	ARRL International DX Contest	SSB
7	Sun 1100 - 1700	DARC 10-Meter Digital Contest	Digi
13-14	Sat 1600 - Sun 1600	EA PSK31 Contest	PSK31
20	Sat 0001-2359	10-10 Int. Mobile Contest	All
20-22	Sat 0200 - Mon 0200	BARTG HF RTTY Contest	RTTY
20-21	Sat 1200 - Sun 1200	Russian DX Contest	
27-28	Sat 0001 - Sun 2359	CQ WW WPX Contest	SSB

April 2010

1	Thu 1700-2000	SARL 80m QSO Party	
3-4	Sat 1500 - Sun 1500	SP DX Contest	
5	Mon 1300-1500	IRTS 2m Counties Contest	CW/SSB/FM
10-11	Sat 0700 - Sun 1300	Japan Intl. DX Contest	CW
10	Sat 1600-1959	EU Spring Sprint	CW
17	Sat 0001-2359	Holyland DX Contest	
17	Sat 1600-1959	EU Spring Sprint	SSB
17-18	Sat 2100 - Sun 1700	YU DX Contest	
24-25	Sat 0001 - Sun 2359	10-10 Int. Spring Contest	CW
24-25	Sat 1200 - Sun 1200	SP DX RTTY Contest	RTTY
24-25	Sat 1300 - Sun 1259	Helvetia Contest	

Worked All Europe (WAEDC) CW 2009

Single Op High

	Call	QSOs	Mults	QTCs	Score
1	EI2JD	231	198	39	53,460

Single Op Low

1	EI4CF	38	59	0	2,242
2	EI4GXB	15	18	0	270

Worked All Europe (WAEDC) SSB 2009

Single Op Low

1	EI4CF	338	120	0	125,934
2	EI4DJB	69	30	0	9,603

SWL

1	EI1429	85			13,254
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Committee Nominations

If you are interested in getting involved with the IRTS Committee and being nominated for election at the upcoming AGM, please contact any committee member.

New blood is very necessary in any organisation and IRTS always welcomes new members on to the committee. Many of the long serving members would be delighted to hand over some of the workload.

PSKmail

Important for all travelling Hams and sailing vessels. There is a new digital communication software special for shortwave available.

PSKmail is an open source development of Rein PA0R.

Free availability to all operating systems, no expensive hardware and easy installation are main advantages.

Recently there is a special version of INTERMAR PSKmail Client Win V 1.4 for maritim mobiles available.

Key applications are the fully APRS accessibility for position, mail and QSO.

Also the possibility of broadcasting, transmitting and receiving of weather bulletin and position without connection to a server is different to other known systems. All the tools and maps for the presentation of positions, gribfiles, fleetcode and met area weather data are included.

Other useful applications such as emergency calling et al. are in preparation. The development team is looking for suitable Ham stations to set up servers worldwide.

Get more information and download at www.pskmail.eu

Supported by the German Maritime Mobile Service Network INTERMAR e.V.

www.intermar-ev.de

Free membership for a year!

To encourage more members to pay their subscriptions by direct debit and to reward those who are already doing this, we are offering free membership for a year to **five** members, drawn from everyone who has a direct debit mandate in place for their annual IRTS membership subscription.

What's the benefit for the Society?

A renewal notice does not have to be issued, while processing and record updating is completely automatic – a saving on paper, postage and the time of our volunteer officers!

What's the benefit for the members?

Payment is made automatically, you don't have to post a cheque – a saving on time, postage and possibly on bank charges.

Direct debit payments can be made from most Republic of Ireland bank or building society current accounts. You can cancel a direct debit mandate at any time by informing the Membership Records Officer.

To those who have a direct debit mandate in place already – a big **thank you** from us, you will be included in the forthcoming draw. To other members with bank accounts, we ask you to consider completing the direct debit mandate included with this issue of Echo Ireland; a direct debit mandate can be submitted at any time, it will not be activated until your current membership subscription expires. Send the mandate to:

Joe Ryan EI7GY
IRTS Membership Records Officer
34 Watson Road
Killiney
Co. Dublin

All members with a direct debit mandate in place on 31st March 2010 will be included in a draw for **five free memberships for a year** which will be held at the Annual General Meeting on 25th April 2010.

Sean Donelan EI4GK
Treasurer
donelansean@gmail.com

Joe Ryan EI7GY
Membership Records Officer
memrecords@irts.ie

Region 4 IRTS News.

15 candidates are now attending Radio Theory Classes at the Limerick Institute of Technology. Classes commenced on 13th January and classes run for 20 weeks on Wednesday nights from 1900 – 2100.

Instructors are Ger McNamara EI4GXB, Gerry Byrnes EI3JU, Simon Kenny EI7ALB.

Pictured below are some of the students;

Top L-R: Mike Griffin, Dave Maxwell, 2nd Row: Michael Hehir, Kieran Smalle, Paul McCormack, Teady Connolly. 3rd Row: Tom Galvin, Pat Ryan, Colm Kenny, Brendan McNamara, Front Row: Krzysztof Jankowski
Missing from picture: Chris Lawlee, Jeremy Aspell, John Kennedy, Karl Gleeson.





Excerpt from the HX files

A Look at ATV with Pat Fitzpatrick EI2HX - Excerpt 008

Hello and welcome to excerpt 008 of the HX files.
I hope you had a good Christmas and Santa was good to you.
(I won the Lotto, so you can all go and.....).
Firstly, I would like to wish you all a very Happy New Year.

Stocktaking

As it is a new year, I said that I would do an inventory of my ATV stock so I would have an idea of how much I have and try not to have too many of the same things. You would be surprised that you could forget just how many Tx or Rx or relays you have and as some of the gear is small, some could be lost in my stockroom. (filing cabinet and cardboard boxes)

The first thing I did was to buy some good containers that would protect the stock and if the containers were transparent I could see at a glance what I had. The ones I used I bought from Maplin and they could be stacked. So over the Christmas holidays I did some stocktaking and I had to decide when is enough enough?. It's amazing when you have a stocktake just how much you can accumulate and how much you have spent on your stores department. Just look at the coaxial plugs you have, aerials, brackets, the spare lengths of coax, to name but a few. (although I know a few radio amateurs that don't even have a spare fuse) .

I am all for having spares, as with the ATV end of my hobby if I need some parts it's nice to go to the spare parts department and not have to go online, order the parts and wait for the postman to arrive with your goodies. By the time the parts arrive you probably have moved on to another project and more than likely used the parts from the first project.

It is nice to have a project or two on the go to keep you up to date, but the parts I have should keep me going to the end of the world, 2012, I enjoyed that film the CGI (special effects) were great, anyway I digress.

Projects

The first project of the New Year was to build some gear that was of multi use so that I could use it on a couple of different projects and as I had a few spares lying around I had all the parts I needed.

I decided to make a drive unit that had could transmit on 3 bands, 1.2, 2.4, and 10 GHz bands. I decided to make it receive also, then I could get as much as I could in the size of the unit and it would be a handy item for portable or mobile use.

The metal I used was from an old tower PC and if I cut it right I

would be left with a good finish from the coated pc metal case.

As I mentioned in a previous file, scrapped PC's are a great source of small brackets and nut's and bolt's.

Photo 1, shows the hardboard template of the front panel fitted with the Tx/Rx units. When I was happy with that I used it to scribe a line on the metal and then I was able to cut it out using the various tools I mentioned in the last Echo Ireland.

In **photo 2** you can see prototype 002 (001 did not fare out too well, see **photo 3**).

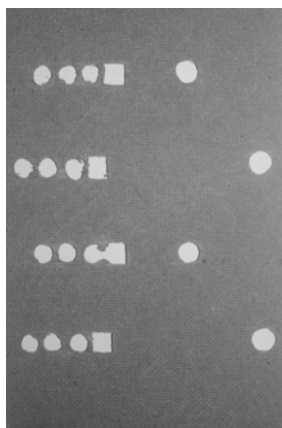


Photo 1

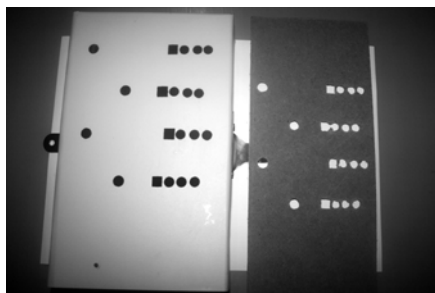


Photo 2



Photo 3

The metal was bent into a U shape and some of the entry and exit holes for the various leads and connections plus the shelves/brackets that hold the various Tx/Rx boards are in place.

Photo 4 shows the finished project and you can also see that I have left some space for some add-ons, because you never know what's around the corner.

This little unit will serve as a test Rx and Tx driver.

In **photo 5** you can see another little project I have almost finished. It will be by the time you read this (I hope). The photo was taken without the wiring harness.

It will be a 50mw Tx and Rx unit and as it is attached directly to the aerial and feed with a multi core cable made up for audio, video and 12v +/- power for the relay and the Tx/Rx unit. I used a good quality sealing compound to keep out water and to bond the box to the boom of the aerial.

When I decide to upgrade the power I will need a bigger project box as I have a small 2 watt amp to install at a later date. The 50mw Tx/Rx unit will do for sending a signal to a close contact like Tony EI4DIB who lives around 500 meters from me and Mark EI9FX who lives a few kilometres who would be my DX contact on the 50mw.

And finally.....

Many thanks yet again to Thos EI2JD for taking the photos for me. I hope to see you at the first rally of the year in Dublin on Feb 14th. What a day to bring your nearest and dearest to a rally and show her or him the other love of your life, as long as they don't see the prices.

73 and may all your signals be 5x9 de Pat EI2HX.

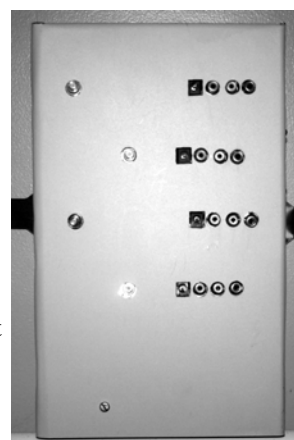


Photo 4

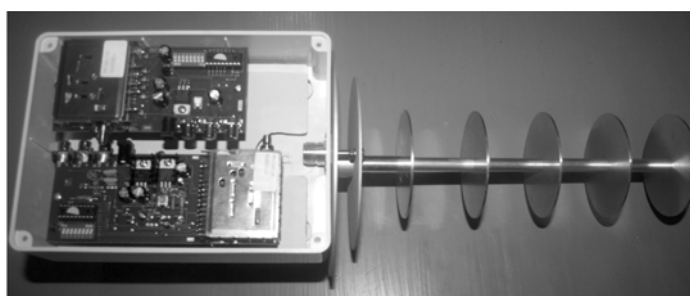


Photo 5



The Dublin Hackerspace

A new group has been formed in Dublin. Its aims and objectives are to cover many different hobbies and interests including radio and electronics

by providing a space where people can meet up and work on various projects.

Different from most other clubs, this group have rented their own premises where members can meet up any time day or night and it enables working late into the night or all weekend. Other facilities provided include a shower and kitchen area so meals can be prepared. As well as two rooms with work-benches, another room with a TV and DVD and couches is provided for socialisation and for people to mingle. The group has ties with similar clubs in Europe and in the USA.

The main aim is to provide a workshop where people can meet and work on their individual ideas as well as group sessions such as talks and training sessions.

The idea for the space came out of articles and talks on how similar groups operate especially in Germany. A group from Ireland headed abroad and visited similar clubs and based the setup and structure on them.

While many radio clubs have falling memberships this type of shared space is growing. Generally members can use the space in any way they want to, and hopefully get the help and advice of others. For some larger projects often people from abroad meet up and work together over the space of the weekend.

The activities are not limited to radio nor electronics.

In fact most of the current members don't have radio licences nor have particular electronics experience. Many are just interested in technology and computers and want to learn more.

It aims to be a place for technology enthusiasts to meet up and share ideas and learn from each other. It also enables those living in small flats or apartments a space like a garage or spare room for soldering, drilling or generally making things.

As well as work benches there is also fast internet and the plan is to run various computer experiments such as a server room where people can bring in computers and help fix them and learn from other members.

Similar clubs in other countries have purchased lathes and other heavy machinery which would be impossible to access for most individuals.

The New York club has built themselves a three dimensional printer. It's like a normal inkjet printer, but instead squirts hot-melt-glue. This glue then cools and becomes hard plastic.

By leaving the printer to work overnight it creates layer after layer ending up with a solid plastic 3D model of the item to be created. This means complex plastic parts can be made to order such as prototypes of new products or small volume items.

It offers an environment for those who work from home, and want a place go to after work and be able have a "chat around the water cooler" with like minded people and maybe get involved in a project in the evenings.

One of the many projects, in progress, is a replica arcade game machine, which will add to the things to do at the club.

One of the hopes is to create a 'community space' where people can pop in and say hello. It's like the perfect radio shack, radio club and the social side of a pub combined.

It should be a place, where someone interested in technology,

meets like minded people.

The group uses the term hackerspace to define what the club aims to be. The word hacker is used to describe someone who is interested in technology and how things work as opposed to the Medias use of it, as someone who wants to do evil or illegal activities and uses technology.

Indeed the club has included rules on doing nothing against the law and indeed the worst that happens is voiding the warranty by opening up and exploring the innards of the latest mobile phone or VHF handheld.

Currently the club has about 20 members with the aim of extending this to 50 so we have the funds to rent an even bigger space. There are 3 licensed radio experimenters and all others have an interest in electronics and technology. There are many members from the computer world with many experienced people from the world of software and open source computing.

The aim of this article is to encourage those in the greater Dublin area to get involved in our space and to encourage those from other radio clubs to come and visit if you're in the Dublin area.

We would also encourage other clubs to look at the way our group is run and see could your radio club move towards this more loosely defined group that gives more scope for the members to try different things.

As getting a licence is not the main reason people join this club it allows people to get to know hands on electronics before committing to studying for an exam.

Now is a great time for a group to rent their own premises as rents are falling and many commercial office spaces lie empty. The choice of buildings is great and rents can be haggled and long term leases do not need to be signed.

Indeed we have a premise on a month by month basis which is great for a club starting up. The main downside is the cost. With 20 members, each paying 50 euro per month this gives the club enough to pay rent and the electricity bill.

We hope with 50 members we can get a larger place and charge everyone less. Some large clubs in Germany only charge 20 euro a person but these have over 200 members.

For the monthly payment each member gets a door key and can come and go as they like.

So if your interest has been peaked by this article why not visit our website at <http://www.tog.ie> or view the other places around the world at <http://www.hackerspaces.org> or call into us at our own place at:

TOG, Floor 2, 40 Arran Quay, Smithfield, Dublin 7





VHF & Up Roundup with Trevor Dunne EI2GLB

ei2glb@hotmail.com

Hello and welcome to the first edition of VHF & Up roundup for 2010. Let's hope it will be a good year for VHF/UHF propagation.

6m

We start this month with a quick overview of the bands and as we are in the Sporadic E mini season there has been some openings on 6m into Europe.

There have been brief openings on 6m most days towards the end of January with contacts into Spain, Italy, Denmark and Switzerland reported.

There was quite a good opening on the 22nd where I worked 15 stations in both Spain and Italy. All stations were in and around the 1500-1800 km range.

Stations in the UK were working into central Europe but nothing was heard at this location. The band was open for at least 3 hours with some very strong signals noted.

Other EI's spotted on 6m were EI9FBB, EI4EY and EI3GE.

The 6m Beacon on the Hill of Allen, Co Kildare has been spotted a good few times in January by stations in Europe.

4m

There have been no reported openings on the 4m band.

I am not active on the band due to antenna problems at present. I hope to upgrade my antenna when the weather gets a bit more pleasant and have lots to report in the coming months.

2m

Jim EI3GE was active during the last UK activity contest at the start of January as was I. He seemed to have a good pile up of G stations calling, but conditions were not great here and my best contact was G4DEZ at 466 km.

There has been no real Tropo to speak of and that has limited the amount of contacts on the band. Let's hope we get a few more openings to liven the band up.

70cms

No activity to report for this band.

In last months edition I mentioned some awards that are available for active VHF

2009 Table							
Callsign	50 MHz	70 MHz	144 MHz	432 MHz	1296 MHz	10 GHz	Totals
EI2GLB	224	42	57	10	0	0	333
EI2JD	239	1	27	5	0	0	272
EI310	179	55	9	0	0	0	243
EI3GYB	164	33	41	3	0	0	241
EI8JK	172	0	54	0	0	0	226
EI4GHB	104	4	82	9	12	8	219
EI8IQ	139	13	34	1	0	0	187
EI7IX	102	44	0	0	0	0	146
EI9FVB	123	0	0	0	0	0	123
EI7GL	108	2	1	0	0	0	111
EI4GXB	109	0	1	0	0	0	110
EI7BMB	41	0	0	0	0	0	41
EI7IG	26	0	0	0	0	0	26

Updates to ei2glb@hotmail.com

Amateurs. Well as the year is past it is time to submit your entries for the 6m and 4m shields.

Peter EI4HX is the Awards manager in the IRTS and you can submit your log to him for which ever band you were active on.

His email address is available on the IRTS website.

I also want to get the final Squares table updated on the website so can people please send me their totals for the year and I will get it updated

MRG Challenge

I included the results of the Challenge last month but I want to say thanks to the members of the Group, especially John EI7FAB and Joe EI3IX for a lovely piece of Mayo Crystal that they sent up to me for winning the fixed section.

You can see it here along with the other equally nice piece I got for winning the portable section in 2007.

Sorry about the quality of the picture as I am no photographer. Hopefully more people will take the time to be active this year, and I know the Group are

planning to alter the start time so that it can catch the end of a major contest in Europe which hopefully with some good conditions will make some long distance contacts a possibility.

Its time to start planning that new antenna system or other station upgrades so hopefully we will hear some new calls on the V/UHF bands in the coming months.

That's all I have for this month.

I really hope some of the active members can send me in some reports of activity during the year ahead, as I am sure people will get bored reading what I managed to work and the bits I can find on the cluster.

73,
Trevor EI2GLB



EI2GLB MRG Challenge Tophies

Donation of Kia Rio

In the December issue of Echo Ireland we told the story of John Riordan and his car. A Cork man now living in Donegal, John was diagnosed with Multiple Sclerosis some thirty years ago. The progression of his illness was gradual and for many years he was able to live a relatively normal life. By 2008 he was in a wheel chair but in July of that year he purchased a Kia Rio and had it adapted for disabled use. He also had a Yaesu FT 857 with HF and VHF antennas installed in the car. His ambition was to visit all the counties of Ireland and get to know their people and principal features while working the bands on his mobile radio.

Unfortunately for John, his physical condition deteriorated and towards the end of 2009 he found that he was no longer in a position to drive the car. At that stage he decided that he would donate the car to a charity or worthy cause and with the Amateur Radio equipment already installed he felt that the IRTS was the most suitable recipient.

Grateful to John for his generous gesture, IRTS decided to offer the car for sale by tender and the terms of the tender offer were spelled out in the December issue of this Journal. Little interest was shown in the purchase of the car which now remains in the possession of the Society. It is still available and open to offers and Sean Donelan, Treasurer of the Society will be happy to talk to anybody who might be interested. He may be contacted at donelansean@gmail.com or by phone at 01 2821420.

In the meantime the Society has taken steps to investigate alternative means of disposing of the vehicle and anticipates that these will come to fruition shortly.



The International Award program "World Castles Award - WCA" devoted to work on the air from castles, fortresses and other fortification works. It was founded on January, 14th, 2009 by group of Russian radio hams, members of RZ1CWC Radio club under the aegis of the International Organization "Castles On The Air - COTA".

The program goal is consolidation of radio hams from different countries for activation and popularization of historical objects – castles, fortresses etc all over the world, learning and maintenance of the historical heritage in our countries including monuments and architectural constructions relating to fortification.

The World Castles Award program includes 11 diplomas, 1 award plate and E-Awards series for QSOs/SWLs with radio stations working from world castles, fortresses etc all over the world.

At present time World Castles Award program cooperates and keeps up a friendly relations with such well-known national castles' and fortresses' award programs as:

- "Belgium Castles Award" (BCA), Belgium
- "Czech Castles Award" (CCA), Czech Republic
- "Castles And Stately Homes On The Air" (CASHOTA), England
- "Castles And Stately Homes On The Air - Ireland" (CASHOTA-EI), Ireland
- "Castles On The Air Team - Germany" (COTA-DL), Germany
- "Castles On The Air - Netherland" (COTA-NL), the Netherlands
- "Castles On The Air - Russia" (COTA-RU), Russia
- "Castles and Palaces of Belarus Award" (CPBA), Belarus
- "Diploma dos Castelos e Fortalezas de Portugal" (DCFP), Portugal
- "Diploma dei Castelli d'Italia" (DCI), Italia
- "Diploma Monumentos Historicos Portugueses" (DMHP), Portugal
- "Hungarian Castle Series" (HCS), Hungary
- "Le Diplome des Chateaux Suisse" (DCS-SSD), Switzerland
- "Diplome des Forts et Chateaux de France" (DFCF), France
- "Slovakia Castles Award" (SCA), Slovakia
- "Swiss-French Castle Award-Diplome des Chateaux de la Suisse-Romande" (SFCA-DCSR), Switzerland
- "Ukraine Castles and Fortress Awards" (UCFA), Ukraine
- "Zamki w Polsce" (ZWP), Poland

Monuments and architectural constructions relating to fortification from countries of Asia, Europe and the South America are present in lists of Historical objects for World Castles Award program.

We invite the co-operation of radio amateur organizations, radio clubs, radio hams of all countries to actively participate, express an interest in historical places within the limits of our hobby, to learn history, to receive good unforgettable impression of work on the air from world fortresses!

Welcome!

73 & 11! de Andrew RN1CW. RZ1CWC team

<http://www.wcagroup.org/ENG/main.html>

EI Participants.

Email Steve EI5DD (see cashota Ireland website) for an issue number of the castle which you are going to activate and provide the following information:

- | | | | |
|--------------------------------|---------------------------------------|-------------|---------------|
| 1 Castle Name | 2. County | 3. Location | 4. WAI Square |
| 5. National Grid Reference | 6. Brief History | 7. Picture | |
| 8. Date of Proposed Activation | 9. Name of Person or Group Activating | | |

A minimum of 10 days is required to allow publicity via IRTS news and CASHOTA websites.

www.cashota-ireland.org

GI Participants.

www.cashota-ni.org

Bobby 2I0ULL on 07747019438



Baluns - Part II

by Tony EI5EM

In Part I, I summarised what a balun is and when one should and should not be needed in an antenna system.

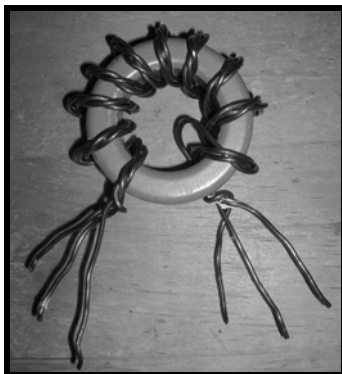
To recap, most modern transmitters have an unbalanced output (50/75 Ohms) and the antenna feeder is usually unbalanced co-axial. The currents in the inner and outer conductors of the feeder are unequal.

When this unbalanced system is feeding a balanced antenna (e.g. half-wave dipole) a balun transformer can be inserted to transform the unbalanced state of the transmitter and feeder so that the antenna is looking into a balanced system with equal currents flowing in each leg of the antenna. A balun transforms from a balanced to an unbalanced state or visa versa.

A balun could be fitted next to the transmitter if a balanced antenna was to be fed with balanced feeder (ladder-line). The use of a balun in such systems can help reduce unwanted radiation (TVI).

There is no reason to install baluns between unbalanced feeders and unbalanced antennas.

Balun 1:1 Ratio



The photograph above show a simple 1:1 balun wound on a toroid former of 2" diameter. These toroids are colour coded depending on frequency of operation. This toroid is coded red and in literature is called a T200-2.

I used this core because it was to hand. The yellow T200-6 core could also be used. Data is available on the Amidon web site. The T200-6 has a higher frequency specification than the T200-2.

See <http://toroids.info/T200-6.php> and <http://toroids.info/T200-2.php>

I bought several of these cores at Donnington Park several years ago. Construction is quite simple.

Three lengths of insulated enamelled copper wire were twisted tightly together.

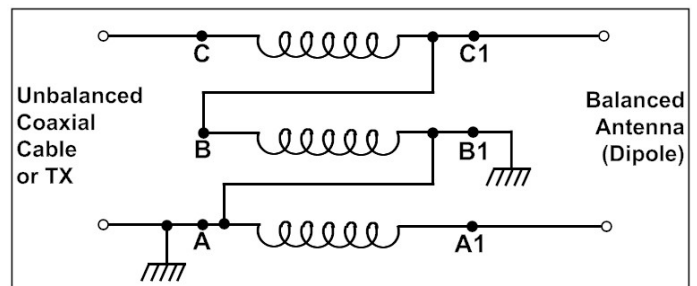
The wire was salvaged from an old mains transformer and I am not sure of the wire gauge. At a guess I would say it is about 16 SWG.

The twisted wires are looped through the core about 10 times and their ends splayed out as shown. The end of each wire must have its insulation removed and both ends of each identified.

For our example we will label the wires A, B and C.

On the left of the photograph we have A, B and C while on the right we have the corresponding A1, B1 and C1. As shown, there should be no connection between A, B and C. This can be checked with a meter before assembly.

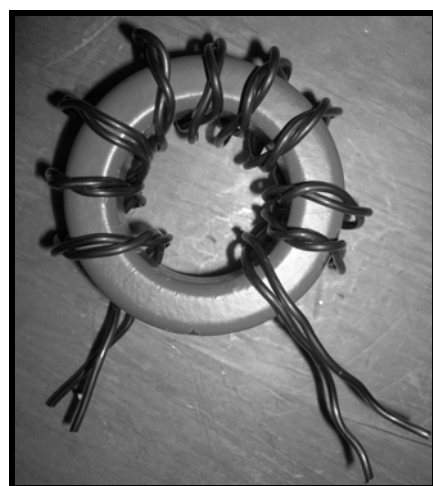
The ends of the wires are connected and terminated as shown in the diagram below.



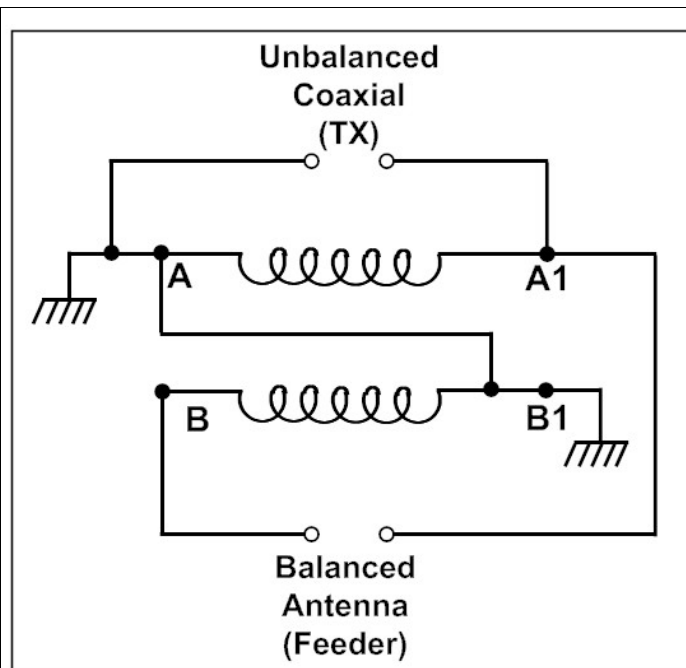
Note that A and B1 are soldered together as are B and C1. The balanced antenna is connected between A1 and C1 and the output from the transmitter between C and A with the braid or ground connected to A. The impedance between A and C is the same as that between A1 and C1 but the transformation is from unbalanced to balanced state. This design would be suitable for feeding a half-wave dipole (balanced) with coaxial cable (unbalanced).

Balun 4:1 Ratio

The photograph and drawing below show construction of a 4:1 balun.



As well as transforming from an unbalanced to a balanced state there is also an impedance transformation of 4:1 ratio. This arrangement could be inserted between a transmitter and a folded dipole to match the 50/75 Ohm output impedance of the transmitter to the nominally 300 Ohm impedance of the folded half-wave dipole.



In this arrangement there are only two windings (bifilar). Before winding around the toroid core the conductors are wrapped tightly around each other as illustrated. A and B are on the left in the photograph and A1 and B1 the corresponding ends on the right. A and B1 are soldered together and connected to ground (braid of coaxial cable). The coaxial feeder is connected to A and A1 and the balanced feeder or antenna connected to B and B1.

By balance we mean that each half of the system is identical. A half wave dipole is balanced (if centre-fed). If we look at the drawing for the 4:1 balun from the two balanced terminals we can see that it is in fact truly balanced as each terminal has an identical winding between it and a ground-point.

Baluns can be constructed for other matching ratios but their construction is beyond the scope of this article. The 1:1 and 4:1 baluns are the most commonly encountered and I hope that this brief article has dissipated some of the mystery surrounding baluns and that it will inspire some home construction.

It is not necessary to use the identical cores used in this article. Other similar cores can also be used provided they are suitable for the frequencies in use and are large enough not to overheat at the power levels used.

Further information on toroid cores is available on <https://www.amidoncorp.com/>

For those interested in further reading, I highly recommend *Building and Using Baluns and Ununs (Practical Designs For The Experimenter)* written by Jerry Sevick (W2FMI). This can be ordered from the Amidon website <https://www.amidoncorp.com/items/52>

Best 73 de Tony EI5EM.

A message from the EI-3-series QSL Manager.

Pat Fitzpatrick EI-2-HX, the QSL manager for the 3-series of QSL cards has informed me that he posted all the cards he had a couple of days before Christmas. He went on to say that he also returned the non-members cards back to their point of origin, after he had held onto them for twelve months, "just in case they joined the Society". As for the QSL cards for members that have lapsed this year, Pat said that that he will do the same for the next twelve months also, and in the fullness of time they will be returned to whence they came, in the event that the former member's have not rejoined.

As for the amount of QSL cards that have been returned in 2009, that came to a total cost of €47.55 just for the EI-3 series of calls alone. Pat said that the amount of QSL cards was smaller than this time last year.

The postage that was spent on sending the cards to the paid up EI-3 series members was €334.95 for 2009.

One further item of note Pat said was the amount of cards stamped "SORRY QSO NOT IN LOG" cards coming back to Ireland. Does that mean that there are a lot of pirates out there, or are the wrong keys been pressed in the heat of the pileups. Only time will tell.

So, if you are reading this edition of Echo Ireland that you perhaps got from a member, or from the I.R.T.S. stand at a rally and you would like the QSL cards that are waiting for you, why not join or rejoin.

You know it makes sense.

Trans-Atlantic Reflector

Hello All,

QSL.net/QTH.net has been very kind to let me establish this "Trans-Atlantic" re-mailer. If you are interested, please subscribe. Please feel free to pass on this information to anyone that you feel would be sincerely interested.

TransAtlantic--This remailer is amateur radio operators and DXers that are interested in completing or helping to complete a contact across the Atlantic from North or South America or the Caribbean to Europe or Africa and their associated islands on 144 MHz or above. Reports, discussion and liaison activities are welcomed. This includes discussion of possible or actual Trans-Atlantic propagation above 70MHz, including the FM Broadcast, TV, and all Amateur bands.

There are quite a few stations on both sides of the Atlantic interested in making an initial 2 meter (or higher) contact. It's been about 10 years since the Irish Radio Transmitters Society has offered an award, the Brendan Cups, for the first pair of stations to accomplish this qso. No one has done it yet. This remailer will be about helping to make this happen.

General information about the mailing list is at: <http://mailman.qth.net/mailman/listinfo/transatlantic>

Thank you
Mark Casey, K1MAP, Hampden, MA., FN32sb

Contesting with the Dundalk Club EI7DAR/EI0W

Contesting, contesting what's it all about? When contests are mentioned at our club meetings the few usual suspects start their moaning, 59 59 59 59 59 is that all? Well yes there is a little bit more to it than that. They forget the good time they had during the previous contests even if they were not on the radio. They forget the camaraderie while setting up and building the antennae, the constant supply of tea and the many debates that go on in the background.

The saying "Hi" to many people that visit from other clubs and of course the enjoyment of sitting behind the radio op while he is in full flow working the world and all antennae, software and Internet working flawlessly.

Well, that is on a good day.



4 element Steppir with 2 x 80 and 40 Delta Loops underneath.

The club does most of its contesting from the QTH of Thos EI2JD in Clogherhead, where there is always an "open house" atmosphere. The club call sign is EI7DAR and we also have a contest call sign EI0W. We are lucky to have members that have a wide variety of interests in radio ranging from SWLing, Contesting, ATV, Digital, Satellites, Construction, Repeaters, Internet Gateway and website.

The setup in Clogherhead consists of a 3 element Steppir that covers 10, 12, 15, 17 and 20m and a nest of inverted V's that cover 40, 80 and 160m. On VHF/UHF there is a 7 element on 6m, 2 x 9 elements

on 2m, 21 elements on 70cms, 4 elements on 4m and 26 elements on 1.2GHz. Inside there is a Tentec Orion II, Yaesu FT1000MP, 2 x Kenwood TS2000 and an FT763R with an Ascon FM for 4m. The power is supplied via an Acom 1000 and an OM Power HF amp and an Amplitec UG:2-100/1500 for VHF. The logging is done by Wintest for the Multi-op contests and by Super Duper (SD) for the Single-op contests.

We started off the year with the IRTS 80m Counties where 4 members put in logs, EI2JD, EI6JK, EI8JB and EI4HX. February saw entries from EI2JD in the PA and the ARRL DX CW contests. March started off with the ARRL DX SSB when Mark EI6JK joined Thos in a Multi-op entry with nearly 500 QSO's as EI0W.

On St. Patrick's Day we activated the club call EI7DAR with 300 contacts to the Irish around the world.

The following week Oleg EI2JK and Thos entered the Russian DX using EI0W with 1,160 QSO's in both CW and SSB. March finished with a Single-Op entry from Thos in the CQWW WPX SSB with 846 contacts.

April only saw 2 small contests, the SPDx (Polish) and the JIDX-CW (Japan) with 53 and 12 QSO's.

In June of 2009 the club celebrated its 40th Anniversary with a 48 hour activity on all bands in Clogherhead.

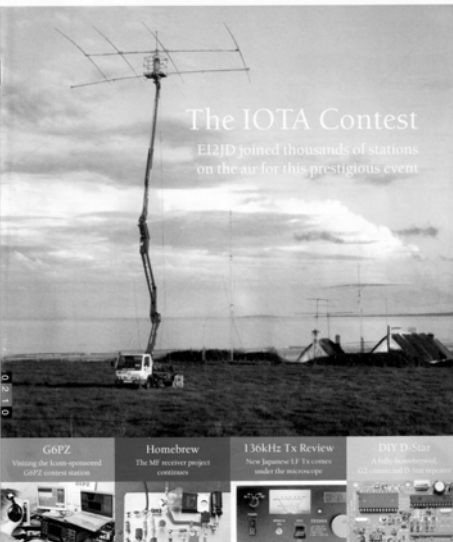
A previous Echo Ireland had a nice write up about this activity.

During this weekend we also set up portable station for the IRTS 80m contest. With all members and friends on site it only took a short time to set up the 80m inverted "V" and shack in the back of a van and we were on the air. Please see the Photo section of the clubs website www.ei7dar.com for a pictorial of the setup.

July is always a busy month in contesting and July 2009 was going to be no excep-

RadCom
THE RADIO SOCIETY OF GREAT BRITAIN MEMBERS' MAGAZINE. WWW.RSGB.ORG

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The station of Thos EI2JD in Clogherhead on the current RadCom cover

tion. It started here with the IARU Contest which is where you will hear the National Societies Head Quarter Stations on air.

Our own IRTS HQ Station is EI0HQ and it was put on air at various places around Ireland by clubs and individuals.

Big logs were received from EI9HX, EI9HQ, EI6FR, EI4CF and EI9FFB who were operating the main open bands with smaller logs from EI5DI, SEARG, EI8IU, EI2CA, EI4GXB where poor conditions did not help on the 10m and 160m bands. The Dundalk club took on the duties on 160m CW and 15 SSB where a new member to the club Anthony EI8GHB showed his skills on the radio in his very first competition. He is now a new member of the EI0W team.

If any one wants to get involved with this contest next year as a station or as an operator please send an email to: contest-manager@irts.ie

The following weekend Thos entered a log in the CQWW VHF operating on 2m and 6m.

The IOTA Contest finished off July with members of the club heading yet again to Clogherhead to help Thos 2JD put together a big array of antennae. With the intentions of burning the airwaves with big signals we rented a "U-Drive" Cherry Picker which gave us the possibility of pushing a lever and getting our antennae up 21m.

Firstly we made up a frame to hold a rotator in place, secured this with 4 Shelley clamps. Then in the middle of an 8 foot pole we put a 4ele SteppIR. This would



Boom for 3 x 40m delta Loops

cover 10, 15 and 20m in the contest. At the base of the cage on the cherry-picker we clamped end on 2 x 6m aluminium poles, which gave us a 12m boom to hang some Delta Loops. At both extremes we hung an 80m Delta Loop and in the middle 6m apart we hung out 2 x 40m Delta Loops. (See Pic C and also last issue of Echo Ireland). There was a lot of rope used to ensure the boom would not bend down when the Delta's were pulled apart and secured. Thos used this setup as his run station antennae and his normal antennae were used on his multiplier station.



Clamping the Rotator to the cage

August saw entries in the Worked All Europe CW, the RDA CW, and for the first time the SARTG-RTTY contests. September brought the RDXC RTTY with 500 QSO's logged. Also for our first time trying was the CQWW RTTY which we entered as Multi-Op using the call EI0W.

The next BIG one was CQWW SSB in October where we got the cherry-picker back to help with some Delta Loops for 40m. This time Oleg wanted to try 3 or 4



40m Vertical with radials



Oleg EI2JK adjusting the 40m loop

but decided on 3 x 40m Delta Loops. We decided to do 40m only single-op as EI2JD and try to break an EI record.

After this we had a rethink about the antennae and decided to try and build some verticals for 40m. The Delta Loops worked very well but it was time to try something easier to put up. The Ukranian DX contest in early November brought us back together as EI0W in the Multi-Op All Bands Mixed section. This time we built 2 ¼ wave verticals from 1 ½ inch aluminium poles. We attached 8 ground radials to each and phased them together pointing to Eastern Europe. They only worked okay and not as good as expected. A little research later and a different length of coax for the phasing harness gave us better results. The following week there was a small log entered in the OKOM DX contest.

The end of November brought with it CQWW CW and an attempt at a new EI record in the 40m Assisted Section. The members helped with putting up the 2 verticals on 40m, this time pointing towards the USA. We also made a 106m beverage for 40m which worked very well. December brought with it the ARRL 10m contest with a small entry in the mixed section. The OK RTTY with an entry in the 40m only section. Last but not least was the RAEM contest where there was another small log entered in the 40m only section.

If any one has any interest in getting involved with building antennae or operating in contests or has any questions or queries on the antennae we used/built please email us at: info@ei7dar.com.

We also built a half sized K9AY for 40m and tried it out during some of the contests but we were not very happy with the results. One of the next projects will be a full size K9AY receive antenna.

Hear you in the contests,
73 de EI7DAR/EI0W.

Outgoing QSL Bureau

Please mail your cards
directly to the

Outgoing Bureau Manager:

Anthony Baldwin EI8JK,
Rathlin, Kilcrohane,
Co. Cork.

ei8jk@amsat.org

Portishead Radio

10th Anniversary of close-down

To mark the 10th Anniversary of the closure of the World's largest Maritime Radio Station Portishead Radio/GKA, a special callsign GB10GKA has been granted.

GB10GKA is being activated for a period of one month 30th April 2010 through 27 May 2010.

Hours of operation will be dependent on individual operator's free time however, it is intended that the callsign will be active extensively throughout the licenced period. Operation will be primarily on CW.

Operations will be on all HF bands from the following stations, each manned by an ex-GKA Radio Officer.

G3YEC Rick 30 April thru 6 May QTH near Colchester, Essex, England

G3ZRJ Tony 7 May thru 13 May QTH near Hereford, Herefordshire, England

GW3UOF Mike 14 May thru 20 May QTH near Treorchy, Mid Glamorgan, Wales

G3TJE/G4HLN Pete/Larry 21 May thru 27 May QTH Nr Burnham on Sea, Somerset, England.

Special Anniversary QSL cards will be produced to mark this historic event, eQSL will also be used.

Certificates for contacting GB10GKA on more than 4 HF bands will be available via soft copy thus at no cost to the winners. If you work us on more than 4 bands please contact G3ZRJ as shown below so that your certificate can be sent to you via email.

Point of contact: Tony Roskilly G3ZRJ g3zrj.morsekey@btinternet.com

Information about Portishead Radio can be found at: <http://www.gka.btinternet.co.uk/>

500 kHz - The Historical Band

by
Finbar O'Connor, EI0CF

A Winter night, the wind blowing in off the Atlantic, snow on the mountains nearby. Inside, the warm glow from radio equipment in a radio station perched on the edge of Ireland's North coast.

I pulled the Morse key a little closer, peered at the small message notepad on the desk, glanced at the big radio room clock, watching the second hand tick ever closer to midnight. It was the night of the 31st December 1988, a bit of history in the making. Malin Head Radio, callsign EJM was going off the air, for the last time on 500 kHz, and I was the guy rostered to do the honours.

An hour earlier, my fellow Radio Officer, who was manning 2182 kHz and the various VHF channels, glanced at me in surprise as Scheveningen Radio PCH, in Holland, suddenly came up on 500 kHz with a huge signal and announced they were closing down on 500 kHz and 2182 kHz with immediate effect. To say we were surprised was an understatement. Along with Norddeich Radio DAN, in Germany, they were the dominant and most powerful signals on MF. We had long suspected they were running huge amounts of power to a massive antenna. Indeed for a time, Scheveningen Radio had caused us an amount of grief, since they shared our working frequency of 421 kHz and their traffic list broadcast coincided with our 0848 utc weather broadcast.

Imagine how we felt when ships complained that our 1 kW signal was being blotted out by PCH, way off the north west coast. Our signal was not behind the door, we did get out well to the west, north and the south Irish sea, yet we were trounced good and proper by our Dutch friends, who, obviously, had access to transmitter power well beyond what we had available. So we were surprised to find that they had just taken themselves off the air, just like that, 'in an instant'.



EJM

Malin Head Radio, callsign EJM with two 50 metre towers, backup "Tee" antenna for 1.6 - 30 MHz operations.

Wire "Tee" antenna strung between the towers for Navtex on 518 KHz.

The main receive antenna is located on the hill seen beyond the station, 1 km distance and fed to the radio station by 600 ohm open wire feeder.

Picture - Finbar EI0CF

During daylight hours 500 kHz provided solid ground-wave coverage, an excellent system for distress coverage.

The provision of numerous coast radio stations, like Malin Head and Valentia Radio, EJK, plus the many thousands of ships all manned by trained Radio Officers, meant that 500 kHz had many many pairs of ears, all listening for any distress, urgency or help, in return.

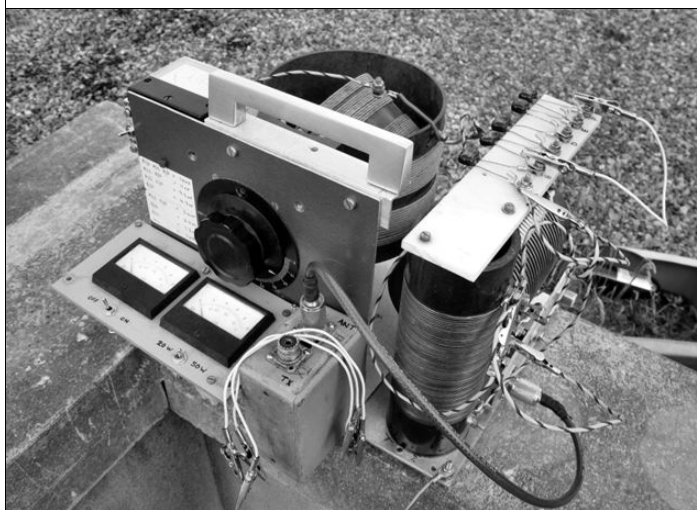
On the 31st of December 1999, all requirements for the use of 500 kHz ceased, many coast radio stations closed down completely and ships were no longer required to have a radio officer. Most ships had already been fitted with satellite communications equipment for distress and normal ships business, supplemented by short range VHF and Digital Selective Calling on 2187.5 kHz, plus the Navtex system of broadcasting weather and navigational warnings on 518 kHz and 490 kHz.

However, those of us who had sailed at sea and served ashore in marine radio, mourned the passing of a service on 500 kHz that had proved it's worth and had helped in the saving of many lives since its inception nearly a hundred years before it's eventual closure.

Down in the transmitter room, or High Tension room, as us old timers called it, the big all valve 500 kHz transmitter blowers whined away, masking the gusts of wind beating against the windows. Two banks of Pye 512 kHz 500 kHz and 421 kHz rigs, main and standby, all nicely lined up. A bright warm glow from one cabinet, the common modulator section for all three channels, was visible through a glass panel. The pair of one foot tall, 4212e Triode valves, the output stage of the modulator, produced 500 watts of audio, at a tone of about 800 hz, to fully anode and screen modulate the final stage of the 1 kW transmitters.

The much smaller SSB transmitters, in a row, at the far end of the room, kept silent and waited in respect for their bigger brother's time in history.

(Continued on page 25)



This picture shows a combined L match 500 kHz ATU, complete with an antenna current meter, a croc clip selection of shunt capacitors, ranging in value from 1 nF to 14 nF. The inductance is readily varied exactly with the ex Decca Variometer of 260 uH and fixed coils, which are also tapped, of 150 uH and 30 uH. This combination of components should match most wire antennas, fed against a reasonable ground.

(Continued from page 24)

Once again I adjusted the Morse key on the 500 kHz desk, the notepad with the close down message was scanned..... again. The 3 minute Silence Period, the time, twice in an hour, when all stations remained just that, SILENT. A chance to hear weak distress calls, from 15 to 18 and 45 to 48 every hour. 2348 utc, a weak CQ from the Black Sea, Bulgaria on the air, then a rapid stream of Morse from Trieste Radio IQX, belting out his traffic list announcement, followed by Mariehamn Radio OHM, up in a frozen Finland, then a gap.

It was time....

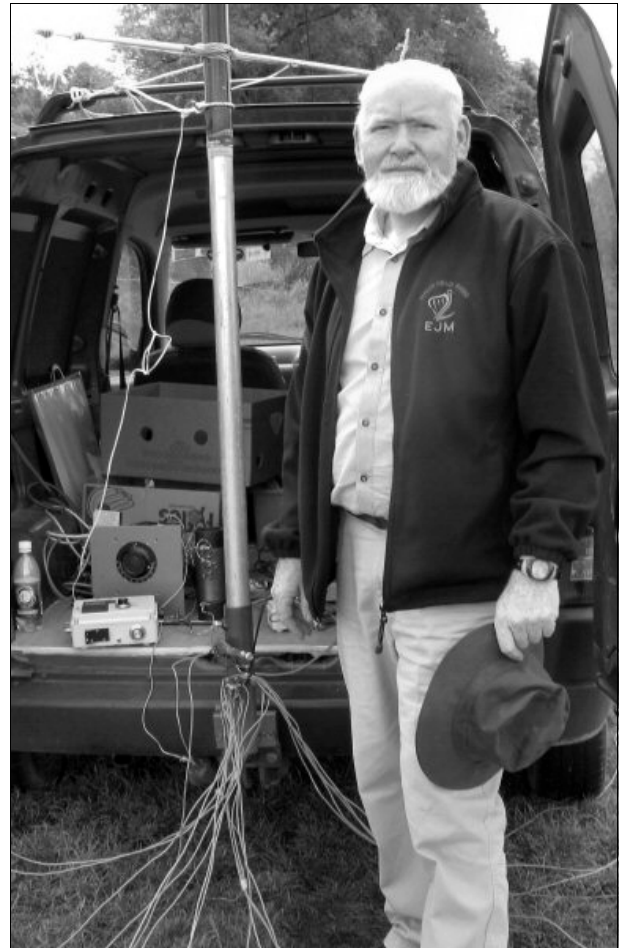
CQ CQ CQ DE EJM EJM EJM

My hand firm on the key, yet inside a mixture of emotions, glad I had been given the chance to send this final transmission, yet very very sad, that we were going off the air on 500 kHz, forever.

The transmission finished, 500 kHz burst to life, ships and coast radio stations, calling, wishing us good luck, thanks for our service over the years, best wishes for the New Year, one even commenting that their time would also soon be upon them.

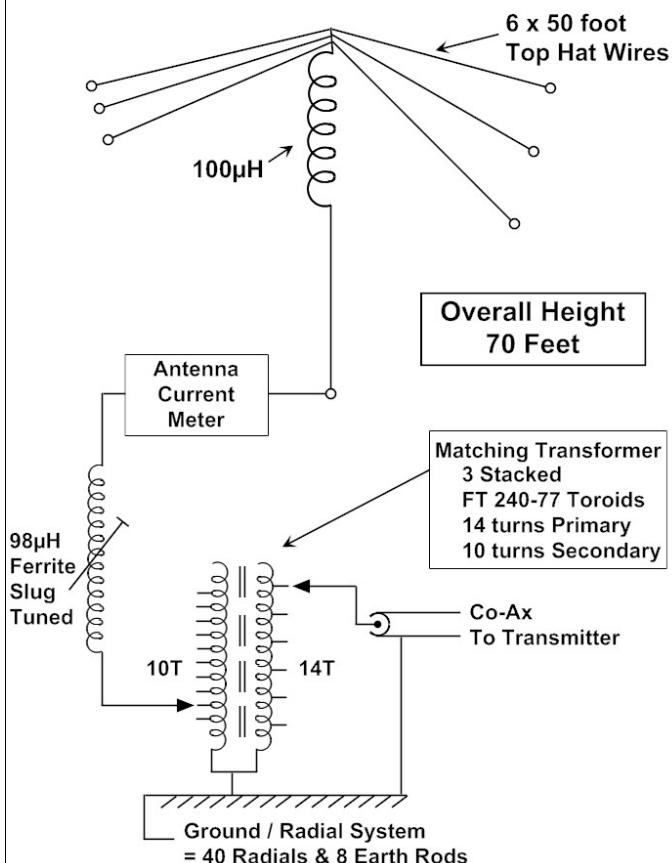
Fast forward to 2008 and the IRTS announces their intention to apply for permission for Irish amateurs to operate near 500 kHz, in the 501 - 504 kHz band.

Permission is granted by ComReg and I dash off my application for a licence. Imagine how pleased I am to receive permission to put a signal out on 501 kHz all these years later. To say that the band has not disappointed is an understatement. It has given me immense pleasure and pride to radiate a signal



Finbar EI0CF at his portable set-up

EI0CF 501 - 504 kHz Antenna



there, once again. Working across the Atlantic to Canada and the USA, to Sweden, Norway, Denmark, Holland, the UK. Cross band, usually to 80m on 3566 kHz, with France, Germany, Ukraine, Finland etc, has been a terrific experience. Ireland is on the air again on MF CW.

I would urge those considering operating on 500 kHz to have a go, it will widen your operating horizons. Don't imagine that Morse will be sent at a very fast speed. It is a most leisurely rate, sent by people who would just love to welcome you aboard and help you reach your new radio destinations.

If digital and data is more of an interest, WSPR is quite popular, and the WSPR programme and help files are easy to download. My reception of weak signals from the UK, Europe and the USA prove it is a viable means for those with low power, small antenna or minimal ERP. Set your receiver to 502.4 kHz USB and let the WSPR programme decode the results. You can then upload what you have received to a common site and those experimenting can see how far their signals are radiating and at what time. Many more countries are joining those already allowed to operate on MF.

Let me take this opportunity to thank the IRTS for their work in making all this possible on 501 - 504 kHz.

Finbar O'Connor, EI0CF
Malin, County Donegal.

500 kHz - Experiments by Brendan Minish EI6IZ

Circuit design at LF is very forgiving and components are readily available from non-specialist suppliers.

For receive I have had good results with my 80m dipole antenna and my 160m receive beverages. The 500 kHz band is very noisy and by far the most important factor for reception is the signal to noise ratio, not overall signal strength.

Using a large ferrite ring with a 20m telephone extension lead wrapped around it followed by an ADSL filter designed for an extension seems to have resolved the issues.

During the day contacts by means of ground-wave propagation appear to be relatively easy to achieve over Ireland and most of the UK. At night greater distances are achievable, I have heard (but not yet worked) stations on the east coast of Canada, US and in continental Europe.

The terms of our experimental licence permit CW and narrow band data modes, to date almost all my operating has been using hand keyed CW and this seems to be a popular mode on this band .

<http://wsprnet.org/drupal/>

Requests for QSO's including cross band QSO's and reception reports are most welcome.

<http://www.davesergeant.com/mf/index.htm>

<http://www.500kc.com/N4ICK/index.htm>

73, Brendan EI6IZ - ei6iz.brendan@gmail.com

- Low cost, high efficiency, simple repeatable design [no toroids]
- PA tests 50R load: $V_s=12V$, check 8W RF [0.8Adc]
 $V_s=21V$, check 25W RF [1.5Adc max]
- Check drain w/form is clean pulse. PA eff'y>80%
- Keying: unshaped [TIP42 cct can be added]

Components from Rapid Electronics
 Photo's & w/forms available

Eco-QTX 13 April 2009
gw3uep/gw4hxo/gi4dpe
[typ values]

500k for $<500p$





Emergency Communications

By Laurent Schoummacker, EI9JV

ei9jv@aren.ie

Dunmore East Exercise

On the evening of December 9th last, AREN members participated in an exercise with Dunmore East Coast Guard.

Over the past several months AREN has been participating in various Sub-groups under the auspices of the Framework for Emergency Management (www.mem.ie). In informal discussions after one of these meetings the possibility of AREN participating in a Coast Guard Exercise was suggested.

In early December, these plans were finalised, and on the evening of the 9th of December, all members were alerted and the exercise was running.

Initially conditions were pretty poor on the night, turning into a bright cloudless sky. From start to finish, the exercise took approximately 4 hours, though it seemed much shorter for those on the ground.

In summary AREN was able to provide communications into what was otherwise a communications black-spot and had members available for logistical support throughout the county, region and country.

Ten Members participated in the exercise and all members enjoyed it and learned something.

Many thanks to Dunmore East Coast Guard unit.

GlobalSet - report

Six months isn't long in passing. Radio amateurs, part of emergency communications groups from around the world gathered on the air for the GlobalSET.

This time around, it took place during the evening time for IARU Region 1, and hence Ireland.

Conditions on HF were very difficult and very challenging for all participants. Little or no stations were worked on CW or Digital modes, with all the traffic being handled on SSB.

Radio station in Glenveagh National Park for Donegal Mountain Rescue Team

Recently, Glenveagh National Park donated a cabin, located in the National Park, to the Donegal Mountain rescue Team (DMRT).

Paul (EI5GTB) and I (EI9JV), assisted DMRT in erecting and tuning the antenna. The long term goal is to have a permanent communications set-up in the cabin for DMRT's use.

Later on that same evening, after the sun went down Martin (DMRT member) and Paul, EI5GTB connected the antenna to the radio mounted in one of DMRT's mobile units. Joe (DMRT Leader) and myself drove for about 5-6 km away from the Mobile Post into the Park forest to perform a radio check using the onboard radio in one of DMRT's four wheel drive vehicles.

We were still able to communicate using the handheld radio at this distance which we then deemed the day a success and we decided it was probably wise call it a day before ending up stuck somewhere or having to drive miles in reverse gear. Now, while this can be fun during daylight, it isn't very funny in a dark forest park.

Two weeks later we met again, despite recent high winds the

antenna was still in place and secure.

DMRT had their team member's assessment that day and as Paul and I had one or two more things to be finalised, it was a good opportunity to see the team in action and close off on the remaining work.

While DMRT were busy being evaluated, we tweaked the antennas of two other vehicles, re-soldered some connections and re-mounted two radios into their Mobile Command Post. Once we had finished all that needed to be done, Paul and I went for a walk to the Castle (about 3km). After night fell the last test DMRT had to go through was navigation, in the dark with a map, a compass, head torch and radio.

Much to my surprise I was delighted when Joe invited one of us to participate as an observer with one of the groups.

The weather was typical for Donegal, wet and windy, but fortunately we were well prepared. Paul was carefully taking notes on how DMRT operated from their mobile post and followed tracks derived from positions received from the groups Simoco Radios on a Laptops LCD screen.

The system operates in a similar fashion to APRS (in Mic-E mode). About 2 hours and a couple of miles later, covered in muck up to the knees, the groups slowly headed back to base for a well earned break.

2009 has been a really interesting year for AREN in the North West and we are hopeful that this is only the start of a long relationship and we look forward to working together in the years to come.



Paul EI5GTB mounting the antenna in Glenveagh National Park



Continuing with Amateur Radio Satellites

by Charlie Carolan EI8JB

Thank you to everyone who have e-mailed queries, most received were about the Yaesu programming with the FT60e and the lack of information in the owners manual with regards to split band or cross band operation. It seems this area may have been lost in translation and the area that actually gives the how to programming information is contained in an area called 'Saving Odd Splits'.

Still I found this a little sketchy with the information provided for the saving of Uplink and Downlink frequencies on different bands and I have amended for my own e-manual with coloured text the additional steps required.

I have the above file on hand if anyone requires a copy please email and I will forward it on.

Also in relation to the Arrow II antenna, it is actually a commercially made one from using aluminium arrow shafts for the elements and inside of the boom there is a small duplexer, this is limited to 10w unless by-passed for direct connections.

The portable FM station has two feedlines going to both the 2m and 70cm antenna located on the same boom and a single feedline from the duplexer back to the transceiver.

There are other companies that produce a similar antenna and also plans available online, you can also find suitable plans for a duplexer. Sandpiper has a similar antenna available, although I have not used their equipment.

In the last issue of Echo Ireland we got the formalities out of the way, now we can move on with more experimenting with FM Satellites. It is time to move forward with some more information that may be of help or assistance with satellite operation.

In this issue you will find uplink and downlink frequencies for more satellites. We will also look at satellite data in a little more detail that you may find useful when trying to find a suitable satellite pass over your location and we take a basic look at some abbreviations and figures in the tracking data to figure out how to use the information provided.

Then you should be able to know where in the sky to try to aim at so that you can catch the start of the pass over your location. This will give you more time on the pass if you are suitably set up and you could be well on your way to making your first satellite QSO if you have not done so before.

I would like to add to that listing the same information for HO-68 & SO-67. Both of these Micro-satellites are relatively new, being just launched recently and at this time there is no set operational schedule or central location for picking the information up from the Internet.

These birds are being commissioned at the moment and get switched on for various passes over the various regions from their ground stations around the globe.

It is hoped in the near future once commissioning is complete that users of these birds can enjoy a relaxed fixed operational schedule like we currently have for AO-51 for a number of weeks at a time rather than the intermittent activity that is happening at the moment.

However regardless of the mode or if the transponder is not

switched on, it is still possible to hear the beacons so you can still test your Rx while waiting.

HO-68 also known as XW-1 has the following frequencies in use on its FM Transponder.

Please note these frequencies will be required to be adjusted for Doppler but a good starting point is listed below. Please also note that a PL 67.0 Hz tone is used on the Uplink.

HO-68 (XW-1)

Satellite Type: Microsatellite

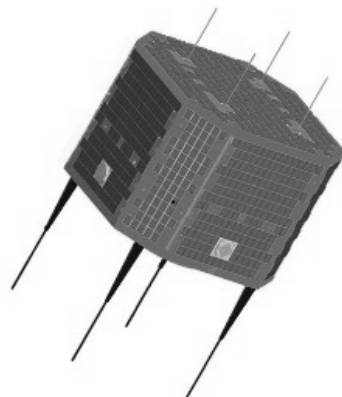
Weight: 50kg

Dimension: 680mm×432mm

Mode V/U (J) FM Voice Repeater (30 dbm (1 w)):

Uplink: 145.8250 MHz FM, PL 67.0 Hz.

Downlink: 435.6750 MHz FM



HO-68 has been added to the AMSAT site at www.AMSAT.org and you can get the pass times here.

However as the operational schedule changes regularly, for an updated list of passes that you may have a chance to receive

you can get more detailed information at www.CAMSAT.cn

Oscar Number: SO-67

Common Name: SumbandilaSat

Alternate Name: SO-67

Satellite Type: Microsatellite

Weight: 81.000 Kg

Mode V/U (J) FM Voice Repeater (Use Narrow FM on the uplink)

Uplink: 145.8750 MHz FM, PL 233.6 Hz.

Downlink 435.3450 MHz FM

SO-67 has also been added to the AMSAT site and more info and operational schedules can be obtained at <http://www.amsatsa.org.za/>

Both sets of frequencies above when used need to be adjusted for Doppler.

It is common to have a selection of



SumbandilaSat

(Continued from page 28)

2-3 frequencies on both sides to allow you to get more air time out of the pass available.

When naming a transponder the input (uplink) is always specified first. A slash "/" is used to separate input and output. Looking at the above data listing Mode Uplink and Downlink taken from the AMSAT website this data is common between Satellite Tracking websites and software packages etc, some with more detailed information like orbit counts and count-down timers until the pass starts above your location.

Link Designator Chart

Frequency	Wavelength	Designator
21 MHz	15 m	H
29 MHz	10 m	T
145 MHz	2 m	V
435 MHz	70 cm	U
1.2 GHz	24 cm	L
2.4 GHz	13 cm	S
5.7 GHz	6 cm	C
10.5 GHz	3cm	X
24 GHz	1.2 cm	K

Transponder Names for reference

Old Name	New Name
Mode A	V/T
Mode B	U/V
Mode J	V/U
Mode K	H/T
Mode KA	H,V/T
Mode KT	H/T,V
Mode L	L/U
Mode S	U/S
Mode T	H/V

When I am operating portable away from home where I may not be too familiar with directions etc. I use a compass attached to my tripod to assist me use the pass data to establish the direction from where to pick up the signal and where I may lose it.

Of course this is very obvious once the bird is in range ☺
I also have attached to the boom an angle finder to assist with angles to point the antenna.

The following terms must be understood to properly use the data available on the AMSAT website;

Date (UTC); this is very important for late satellite passes so we don't miss the bird. Times and dates are always UTC on the AMSAT Site.

For prediction programs some have the option of setting the data for a local time option.

AOS is the time we are expected to have acquisition of satellite. This is the actual time of the start of the pass assuming you have entered your grid information in correctly etc.

Duration is self explanatory and is the total length of the pass in minutes and seconds.

AOS Azimuth is the angle above the horizon measure clockwise. North = 0 Degrees

Maximum elevation is the total angle above the horizon from your location of the particular pass.

LOS Azimuth is the degrees above the horizon for the loss of signal or loss of satellite.

LOS (UTC) Time of loss of signal or loss of satellite, e.g. the duration should be the difference in time between the AOS & LOS

The data above is about the minimum required that you would need to find a satellite on a pass, some sources give more detailed information.

I have been using the AMSAT site as a default to help explain my experiments above, as anyone with internet access can navigate to the same information.

If you would like to have access to the above type of pass data to try work a number of birds, it is possible to use one of the many free programs that enable you to get pass predictions for the various satellites that you can pick by just checking a box for each sat etc.

Then you can run just one pass table with all your favourite satellites listed together in order or pass times.

This is very useful but you will still need to verify the mode in use is the one you are set to use. You can even limit the data to a minimum height above your horizon so you have information you can actually use, instead of a lot of data for passes that may not be possible due to limitations of various antennas or any obstructions.

One of the programs that allow you to do this is called Orbitron and it can be downloaded from various sources on the Internet.

Source Links

Here are some links that you may find useful with the information I have shared in the last couple of articles.

<http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=15384> or google AO-27 antenna design, this is a dual band Yagi built on a single boom.

<http://personales.ya.com/ea4cax/paginaea4cyq/cju/cjuingles.pdf>
HF type Portable antenna for satellite use, higher gain than standard rubber duck.

<http://www.k0lee.com/duplexer.htm> Homebrew

<http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=9394> Orbitron Satellite Software

I hope you have found the above information useful in getting started to experiment with satellites.

I take a low key approach to it myself and enjoy learning and experimenting along the way.

Good luck with your experiments and I hope you have as much fun and enjoyment as I do.

73

Charlie EI8JB



International Amateur Radio Union Monitoring System with Ger McNamara EI4GXB ei4gxb@gmail.com

Welcome to another edition of IARU Monitoring Systems news.

Many thanks to all who have been sending me reports of intruders on our bands. Broadcast stations appearing on the newly allocated segment of the 40M band from 7.100 upwards are causing problems again.

To possibly identify these intruders can members please send me details of transmission time, language, QRG, and station ID heard. I will collate this information, make representations, and hopefully get these issues resolved speedily.

Below is an extract of a possible resolution to some major interference at the CW section of the 20m band.

Source of BC-IM on 14000,0 kHz revealed:

It is "Kashi Radio" from Xinjiang Province, PR China

In the beginning of January 2010 between 13.00 and 14.00 UTC Wolf Hadel, DK2OM, heard a broadcast station on 14000,0 kHz. The beam heading was direction east for the maximum of reception.

Wolf contacted OM Wolf Büschel, DF5SX. He is a licensed radio amateur and a dedicated BC listener with a lot of experience. He owns the latest broadcast schedules and frequencies of BC SW transmitters.

On 20 January 2010 Wolf Büschel wrote to Wolf Hadel:

"The BC signal is probably an Inter Modulation Product of two BC transmitters of "Kashi Radio" from Xinjiang Province, PR China.

Here is the sked:

13710 1300 – 1400 27SE KAS 500 308 French CHN CRI RTC
13855 1300 – 1400 27-29 KAS 500 308 Chinese CHN CRI RTC

Vy 73 de:- Wolfgang Büschel, DF5SX"

If you hit in Google-Earth: 39 21 34,07 N 75 45 20,85 E you can see the tx-er site of Radio Kashi

The officer at Federal Net Agency (Germany) informed me that an International complaint will be sent to the Chinese telecommunications authorities.

Notice board:

14000.0 – 14001.5 - 14003.0 – 21000.3 USB and LSB –Tamil fishery daily

7000.0 kHz – USB/LSB - 1300 UTC and later - pirate net from Far or Middle East

Region 2: A new kind of OTH-Radar is disturbing our 7 MHz-band daily from 1300 – 2000 UTC.

About 3 pulses/sec, sounding like a Codar HF-Radar. USA – east coast

28000 – 29700 kHz --- Many CIS taxis in FM, improving conditions!

Again, many thanks to all who have contacted me with reports. I can be contacted via email ei4gxb@gmail.com.

Vy 73, Ger McNamara EI4GXB

Kells Radio Club EI7KRC Repeaters

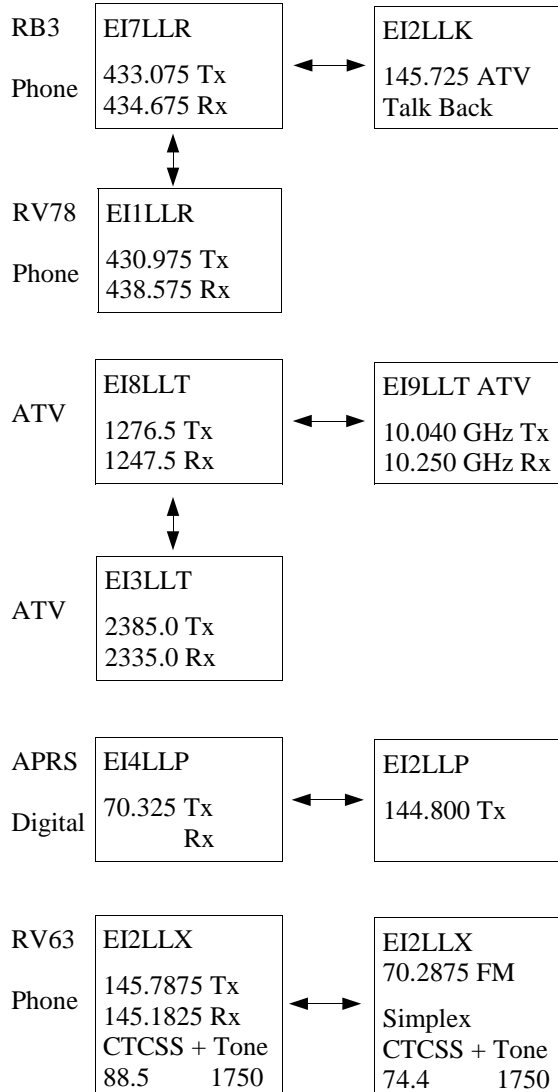
Grid Reference: N53.9004 W6.91128

NGR: E271540 N294508

QRA: IO63mv

All Repeaters are tone control 88.5 and 74.4Hz or Tone burst.

Location of all repeaters: Laughan Lea, Kingscourt, Co. Cavan



Ronnie McGrane EI9ED

Nov 6th 2009

IRTS News on ATV in the South East

The IRTS radio news which is normally broadcast by South Eastern Amateur

Radio Group at 9.30 p.m. on Tuesday nights via the Southern Ireland

Repeater Network is now available live via the EI8WDT, ATV (television)

repeater from Dungarvan, Co. Waterford.

A live video feed is available each Tuesday night at www.ei8ffb.com (details and link to EI8FFB are available on the SEARG web site at www.searg.com).

Updates and enquiries to Thos EI2JD at thoscaffrey@hotmail.com

DXCC Confirmed		44	EI4GMB	Worked All Zones	
209	EI7BA (+2)	43	EI7IM	40	EI4CF
174	EI3IO	43	EI7IS	40	EI9FBB
167	EI4CF (5)	42	EI/DK2AT (New)	40	EJ9FBB
160	EI2JD (+4)	42	EI5IX	39	EI7BA
155	EI9FBB (+1)	41	EI3EBB	39	EI9HX
150	EJ9FBB	41	EI4JR	38	EI2JD
148	EI9HX	41	EI9EW (+2)	37	EI3IO
147	EI6IZ	39	EI6IF	37	EI8GS
144	EI0CZ	36	EI6GGB (+3)	34	EI9JU
140	EI7CC	35	EI8GHB (New)	33	EI3GYB
123	EI9JU (+12)	34	EI1KARG	33	EI7CC
117	EI6HB (+10)	34	EI3JB	32	EI4BZ
115	EI3GYB	33	EI1571	31	EI5IF
115	EI8GS	33	EI7GM (+1)	31	EI6AL
113	EI9FVB (5)	32	EI90GPO	31	EI6JK
110	EI6AL	27	EI3GDB	31	EI9O (+2)
104	EI4GXB	26	EI4IN (New)	30	EI4GXB
102	EI6JK	26	EI7CHB (New)	30	EI9FVB
101	EI4BZ	25	EI2FS	28	EI4GMB
100	EI8FH (+3)	25	EI4DIB (+5)	25	EI0W
99	EI9HQ	25	EI7JZ (New)	25	EI5GUB
98	EI8IU	24	EI7IW	22	EI7JN
97	EI7JK (New)	22	EI/G4DDL	15	EI8JB (New)
94	EI1DG (+1)	20	EI0CPL	10	EI1429
92	EI5IF	20	EI2IV	08	EI4DIB (+2)
92	EI7DAR	20	EI8GNB (New)	07	EI4HX
92	EJ9HQ	18	EI4HX	06	EI4DIB
91	EI0W			06	EI7IW
88	EI9O (+6)	Worked All States		05	EI7CHB (New)
87	EI4GNB	50	EI4CF		
86	EI9ES	50	EI8GS	Worked Prefixes	
81	EI5GM	50	EI9FBB	1,190	EI4CF (+25)
77	EI7IX	50	EJ9FBB	1,035	EI2JD (+23)
76	EI8JR (+2)	50	EI9HX	869	EI8GS (+10)
73	EI3HA	49	EI9HQ	793	EI9FBB (+5)
73	EI2II (+4)	49	EJ9HQ	781	EI9HQ (+40)
73	EI5GUB (+2)	48	EI6HB (+1)	755	EI3IO
71	EJ3HA	48	EI9JU (+4)	752	EI7DAR (+54)
71	EI4HQ	47	EI2JD	723	EI0W (+14)
69	EI8GP	47	EI3IO	640	EI9JU (+187)
68	EI/DH0GSU/p	46	EI9O (+2)	608	EI7CC
68	EI5GJB	45	EI4BZ	586	EI7BA
68	EI9CF	45	EI4IS	578	EI4BZ (+32)
67	EI4HH	45	EI7BA	535	EI9FVB
65	EI7M	45	EI7JN	514	EI4GXB
65	EI8DD	45	EI8GP	482	EI6JK
65	EI8DL	44	EI5GM	436	EI7JK (New)
61	EI4IS	42	EI0W (+1)	371	EI5GM
61	EI9JM (+1)	41	EI4GNB	348	EI5IF
60	EI7JN	41	EI7DAR	307	EI8IU (+14)
60	EI7BFB	38	EI5IF	299	EI8GP
58	EI5GSB (+1)	36	EI9HW	299	EI9O (+27)
58	EI6IL	35	EI7CC	291	EI9JM
58	EI9JF	32	EI6JK	245	EI5GUB
57	EI8JK	31	EI4GMB	213	EI7JN
56	EI7BMB	30	EI4GXB	200	EI4GMB
55	EI2GLB	30	EI9ES	191	EI8JB (New)
55	EI6CPB (+3)	29	EI9FVB	166	EI8DL
54	EI7IQ	27	EI5GUB	75	EI1429
53	EI6ARB	26	EI6AL	52	EI7IW
50	EI6AK	26	EI9JM	51	EI4IN (New)
49	EI2FSB	15	EI8JB (New)	46	EI4DIB (+16)
49	EI8JB (New)	5	EI4IN (New)	45	EI7CHB (New)
48	EI8IQ	4	EI4DIB (+1)	31	EI4HX
46	EI1429	2	EI7IW		

(as at January 25th 2010)

Mixed	265 EI6FR (+6)	17m
353 EI8H	232 EI9FBB (+13)	252 EI7BA (+10)
351 EI6S	229 EI4BZ	189 EI9FBB (+29)
347 EI7CC	214 EI6IZ (+4)	108 EI6IZ (+3)
341 EI6FR	184 EI2JD	107 EI3IO
340 EI2GS	178 EI9JF	
321 EI3IO	134 EI8IU (+24)	15m
316 EI7BA (+4)	119 EI7GY	230 EI7BA (+15)
306 EI2HY	109 EI2IH	191 EI9FBB (+10)
288 EI9FBB (+4)	109 EI4HM	188 EI3IO
269 EI2CR	107 EI/GM4ARJ	171 EI4BZ
262 EI2GX	106 EI1DG	136 EI2JD
253 EI2JD	100 EI6AL	109 EI8GS
248 EI9JF		108 EI3GV
240 EI4BZ	RTTY/Digital	107 EI6IZ (New)
234 EI6IZ (+4)	119 EI6FR (+8)	103 EI9FVB
210 EI6IL	102 EI6HB	
189 EI8IU (+21)		12m
205 EI5GM	Satellite - No Entry	158 EI7BA (+7)
200 EI9FVB		121 EI9FBB (+21)
152 EI6HB	160m	
141 EI9O	195 EI3IO	10m
140 EI4GXB	149 EI7BA (+14)	250 EI3IO
134 EI9HQ	103 EI6IZ (+3)	185 EI7BA (+5)
133 EI7GY		156 EI4BZ
128 EI8HA	80m	144 EI7GL
103 EI6AL	298 EI6S	131 EI2JD
	202 EI7BA (+10)	128 EI4GK
Phone	171 EI9FBB (+9)	123 EI9FBB (+4)
348 EI6S	126 EI3IO	104 EI8GS
345 EI7CC	110 EI4BZ	
338 EI2GS	108 EI2JD	6m
334 EI8EM	101 EI6IZ (New)	157 EI3IO
331 EI8AR		111 EI7GL
317 EI6FR	40m	101 EI3EBB
300 EI8AU	234 EI7BA (+12)	
277 EI3GV	204 EI9FBB (+5)	2m No entry
272 EI9FBB (+3)	167 EI3IO	QRP DXCC
262 EI7BA (+11)	145 EI2JD	No Entry
253 EI4GK (+11)	129 EI4BZ	
234 EI2JD	127 EI6IZ (+11)	DXCC Challenge
229 EI8GS	117 EI7GL	1,904 EI7BA (+92)
213 EI7GL		1,699 EI3IO
200 EI6IL	30m	1,609 EI9FBB (+146)
200 EI9FVB	215 EI3IO	1,521 EI7CC
193 EI9JF	213 EI7BA (+11)	1,342 EI6FR (+84)
186 EI7II	144 EI9FBB (+11)	1,030 EI2JD
177 EI9FE	138 EI6IZ (+2)	1001 EI6IZ (New)
167 EI4BZ	110 EI4BZ	
165 EI2CH		DXCC Honor Roll
135 EI8IU (+16)	20m	
129 EI9HQ	268 EI9FBB (+6)	Mixed
119 EI4HH	267 EI7BA (+11)	338 EI6FR/341
114 EI4EX	243 EI3IO	335 EI2GS/340
108 EI6HB	182 EI2JD	335 EI6S/351
105 EI1CS	170 EI4BZ	335 EI7CC/347
105 EI9HX	154 EI6IZ (+15)	
101 EI3IP	150 EI9JF	Phone
	139 EI9FVB	334 EI6S/348
CW	111 EI8GS	333 EI2GS/338
314 EI7CC	110 EI3GV	333 EI7CC/345
294 EI7BA (+8)	105 EI9HQ	329 EI8EM/334

**Phoenix
Amateur Radio Club**

Radio Rally

Sunday February 14th
at
Coolmine Community School
Clonsilla,
(near Blanchardstown Shopping Centre)
Dublin 15

Doors open for traders at 0800
Public admission at 0900 - 1430
Admission €5.00

For table bookings or enquiries
Ring

Tony: 087-2439997

Tom: 01-8211043

Bring and Buy tables free of charge

**Lagan Valley
Amateur Radio Society**

31st Annual Radio Rally

Saturday 20th March

Village Centre,
7 Ballynahinch Road
Hillsborough, Co. Down
BT26 6AR.

Doors open 1130 Free Raffle

Information from
Jim Henry, GI0DVU
048 926 62270

Mid Ulster Amateur Radio Club

Annual Rally

Saturday 29th May

Drumgor Youth Centre,
Drumgor Heights,
Craigavon.
BT65 4AP

Doors open 1100

For details ring 0044(0)2838348451
cqmuarc@googlemail.com
www.muarc.com

Limerick Radio Club

**Radio, Hobbies
& Electronics Fair**

Sunday 7th March 2010

Radisson SAS Hotel,
Ennis Road, Limerick

Doors open at 1100

Admission €5.00

**No charge for children when accompanied
by an adult**

All the usual traders will attend

Bring & Buy Sale

**Tables for the Bring & Buy Sale can be reserved
by contacting ei4lrc@eircom.net.**

A day at DIGIcon 09

Séamus McCague EI8BP

DIGIcon 09, Ireland's first digital communications conference, took place on September 19th last.

Organised by West Tyrone Amateur Radio Club there were over seventy attendees.

I first heard about DIGIcon 09 from the IRTS News Service. A quick visit to the WTARC website (www.wtarc.co.uk) gave further information, and my enquiry as to exact timings brought an immediate response from Philip MI0MSO.

The venue was the Technology Education Centre in Omagh, an easy drive from Dublin. This is a modern building with a large, comfortable conference room with built-in audio-visual facilities.

On arrival I registered for the Conference and paid the very modest £2 fee. In the foyer there was an opportunity to visit the stalls of JBT Trading, TA Electronics and Stephen Boyd (second-hand radios).

Ian Morrow MI1CCU was providing information on Echolink and the local Echolink node MB7ICU.

Outside in the car park was an opportunity to visit RSGBs GB4FUN. I was immediately impressed by the size of the trailer and the array of antennas. Inside there was plenty of space to accommodate large groups, with equipment cleanly laid out on a bench along one wall.

GB4FUN visited local schools to demonstrate Amateur Radio when in Northern Ireland.

The first lecture on D-Star was delivered by Darren Storer G7LWT. Darren is a member of the UK Interconnect Team (www.ukit.org.uk). The team is working on the implementation of a network based on the ICOM G2 software. There are over 10,000 registered D-Star users world wide and almost 500 gateways, some of which are dual-mode D-Star/FM.

As with all the lectures the level was such that a beginner was able to follow the presentation and yet there was enough "meat" to satisfy the more experienced listener.

Darren reviewed the commercial ICOM equipment and then also looked at some home-brew work that is being done, such as that by 7M3TJZ and the Dutch Star project (www.dutch-star.nl).

The next lecture was by former RSGB President Jeff Smith MI0AEX on the topic of Software Defined Radio.

Jeff owns a Flex Radio SDR 1000 (www.flex-radio.com), a radio defined by the PowerSDR software. As this software is freely available (both source and executable) under the GNU Public Licence (GPL), it is the software of choice for many SDR front ends including the SoftRock series of kits (www.softrockradio.org) which are readily and cheaply available. I could relate to the issues Jeff described in installing the software and getting the system to work. Not that PowerSDR has problems but, like many packages, there are pre-requisites that need to be installed.

Jeff used the M-Audio Delta 44 audio card - one of those rec-



Antennas on GB4FUN

ommended for the SDR 1000. He emphasised that the quality of any SDR front end may be limited by the audio card. I agree completely. Apart from bit size and sampling rate, latency can reduce its performance.

This was followed by a lecture on Satellites by Carlos Eavis G0AKI. Carlos covered the history of amateurs satellites, their types and the bands used.. I learned that satellites spin to cool themselves!

According to Carlos there are 12 satellites we can access and (for those of you who want to have a go) the easy ones are ARISS, FO-29 AO-27, SO-50 and AO-51. Of course the operational status of satellites can change overnight, so further information is available from www.uk.amsat.org/ Carlos discussed station requirements and how to chase the birds. If you want to home brew your own Yagi, www.clarc.org/ArticleRepo/uhf2.pdf is a useful reference.

The final lecture was again by Darren G3LWT and this time the topic was DATV. Darren covered the technologies that are available and then delved into more technical details regarding bit rates and compression. With suitable compression a full-colour signal can be transmitted in a bandwidth of 2MHz, so it might be possible to use 70cms once again for TV.

He described the benefits of working in the digital domain looking at Forward Error Correction (FEC) systems and comparing DVB -C -T and -S and their potential use in ATV. DVB-S offers the possibility to use off-the-shelf Free to Air (FTA) satellite receivers. On the transmit side he stressed that QPSK (used in DVB-S) requires an *extremely* linear amplifier. He pointed his audience to the parts available from SR-Systems in Germany *see* www.sr-systems.de and the work being done by the German ATV Club AGAF *see* www.datv-agaf.de/T_ATV/atv.htm

I had a most stimulating day and came away with lots of ideas for thing to try out in the months ahead.

Hopefully there will be a similar event next year, WTARC have set a high standard. There was something to be learned by everyone whether beginner or more advanced.

DIGIcon 10 will be a hard act to follow.

And the soup and sandwiches were great too!

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Details from Iain on 028 66326693,
Email: gibbjgbb@aol.com
www.lougherneradioclub.co.uk

Members Advertisements

For Sale:

Kenwood TS-850S€650.00
MFJ-962D Antenna Tuner
1.5Kw 1.8-30 MHz€200.00
Alinco HF Mobile DX-70TH
HF +50MHZOffers?
All above boxed with manuals and in mint condition.
Contact Nicky EI3JB on 087-6123261

For Sale:

Rtrak All-in-one APRS Tracker.
See <http://www.rpc-electronics.com/rtrakpromo.php> for more information.
Price €100 o.n.o.
John EI7IG on 087-8167310
jpronans@gmail.com

For Sale:

Sandpiper MV10 vertical antenna covering Top Band to 6 metres.
Ground Post mounting.
Excellent performer.
Manual and mounting details. In as new condition (Cost £160) selling for €100.
Also Carolina Windom 620. Coverage 20 metres to 6 metres. Gain as much as 10db
Manual and mounting details. cost €45.
Contact Tom EI2AJ 01-8211043
Also available at Coolmine Rally

For Sale:

Icom 756PRO - in perfect condition, with original box, manual etc.
Icom SP21 - matching speaker.
Also perfect and boxed.
Icom PS125 - matching power supply.
Perfect, boxed.
I am open to offers - either as one lot or separately.
Contact: Batt EI5HQ in Wexford.
Tel: 087-6614249 or
Email: breelane86@gmail.com

HF Package for DXers.

Strumech Versatower, 3 section heavy-duty telescopic mast with base for tilt-over. Each section 21ft. Base unit 6ft. Bolts into concrete base.
Rotator cage included, this is an additional 5ft. (Will accept extension pole - not supplied.) Tower may need cables. (These are available locally.)
Also Yaesu G650C Rotator and Cushcraft X7 Multi-band HF Beam.
(Create your own sunspots.) All S/H.
Sorry, no delivery service available.
All-in package €1500. No offers, no splits and please, no tourists.
EI7IQ (Mayo) 087-9843900.
Ring before you travel as first to see will buy.

For Sale:

6m 5 Element Cushcraft 505 Yagi.
Perfect condition. One year old.
Price €150.00
Contact EI5GM on 083-3317710

For Sale:

FT-857d 100w HF/VHF/UHF €400 o.n.o.
{FTV-901 Transverter 50,144,430MHz
YR-901 CW/RTTY Reader
YK-901 Ascii Keyboard
YVM-1 Video Monitor
YO-901 Multiscope - €600
All above boxed with manuals
Contact Nicky EI3JB on 087-6123261
or email ei3jb@vodafone.ie

For Sale:

Icom 756 PRO II, little used, mic., manuals. Boxed. PMO. ..€450.00 o.n.o.
Yaesu FT-736R. Serviced in UK. PMO. Manuals & desk mic.€800.00 o.n.o.
Datong Multi Mode Filter. Model, FL3.
Offers?
All above can be seen working,
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are free**

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MI0JBT Jim Bob Traynor, Limavady, Northern Ireland

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www.mi0jbt.com

Used Price List

Icom IC-R7000, Used with Manual	£399.00
Icom IC-7400, Mint, Boxed with manual etc.	£799.00
Icom IC-706MKII, Clean, Manual, Power lead etc....	£425.00
Icom IC 706 MKIIG, Very clean, Manual, boxed, Power lead, microphone etc.....	£549.00
Kenwood TS-870S, Used. Manual/Mic/Power Lead..	£799.00
Yaesu FT-2000D & DMU 2000. Mint. Only 17 months old. A bargain at	£2,100.00
Yaesu, FT-2800M, Good condition, Manual, Power Lead & Microphone	£110.00
Yaesu FT-2000D. Mint. As New. Boxed with manual, Mic etc. Only 15 months old.	£1,850.00
Yaesu FT77. Used, Boxed etc.	£195.00
Yaesu FT-990. Very Clean, Manual on CD	£625.00
Yaesu FT-225RD. Good. Manual, Power lead etc. ...	£215.00
Yaesu MD-200A8X, Good, No box.....	£165.00
Yaesu MD100. Very clean.....	£100.00
Yaesu FT1000 MK5, 200w, Mint, all filters. Boxed, Microphone, manual, PSU/Power lead ...	£1495.00
Yaesu GS065. New Mast Head Bearing - New	£49.50
Watson FC130 New Frequency Finder	£79.00
Watson Hunter New Frequency Finder,	£59.00
Watson FC130 New Frequency Finder	£79.00

New Radio Stock

Current Price List

Yaesu - FT-7800	£189.00
Yaesu - FT-8800	£269.00
Yaesu - FT-8900R.....	£299.00
Yaesu - FT-817ND	£439.00
Yaesu - FT-857D	£629.00
Yaesu - FT-897	£629.00
Yaesu - MMB80 - Mounting Bracket for FT897.....	£17.95
Yaesu - FT-450	£589.00
Yaesu - FT-950	£1099.00
Yaesu - MS100A8X - Desktop Microphone	£149.95
Yaesu - MD200ASX - Ultra Hi-Fi Desktop Mic.....	£242.95
Yaesu - DMU-2000 - Data Management Unit.....	£895.00
Icom - IC-E208	£254.00
Icom - IC-2725E	£319.00
Icom - IC-706 MKIIG	£729.00
Icom - IC-7000.....	£929.00
Icom - IC-7400.....	£1,329.00
Icom - SM-20 - Base Station Desk Microphone.....	£144.98
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Watson W-50 2m/70cm. Base vertical. Length 1.8m
Watson W-300 2m/70cm. Base Vertical. Length 3.1m
Watson W-2000 6m/2m/70cm. Base Vertical. Length 2.5m,
Watson WGM-270 2m/70cm. On glass antenna
Watson W-285 2m 5/8th Whip with fold over base. L. 1.33m
Watson W-627 6m/2m/70cm. Tri-band Whip Length 1.6m
Watson W-77LS 2/7cm Dualbander. PL259. Length 0.42m
Watson W-770HB 2m/70cm. Fold over base. Length 1.1m
Watson W-7900 2m/70cm , Fold over base. Length 1.58m
Watson WSM-270 2m/70cm. Mini Mag. Length 0.46m

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AOR-8200 MkII, 0-260-0 MHz. All mode handheld	€249.00
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Icom ICR 8500 0-2000MHz. All mode Base Receiver	€1,199.00
Icom AH-4, HF + 6m Auto ATU	€299.00
Icom IC PCR 1500 PC Based comms Rx 0-3,300 MHz. As new	€799.00
Icom ICR-10 0-1300MHz All mode handheld scanner	€249.00
Icom IC706 MK2. HF + 6m & 2m. Mobile	€599.00
Icom SM20 Desk Mic. As new condition	€129.00
Icom IC 706 MK2G	€649.00
Icom IC 718 - 100w HF Rig.	€999.00
Icom IC-7400 HF/6 & 2m. One only	€1,399.00
Icom IC-756PRO Boxed & mint	€999.00
Icom IC-821H 2m/70cm 45/35w base multi-mode,	€799.00
Kenwood AT-50. Matching Auto Tuner for TS-50	€249.00
Kenwood TM455E 45w, 70cm multi-mode,	€199.00
Kenwood TS-570DGE, HF rig with DSP AUTO ATU	€799.00
Kenwood TS-790 2m/70cm/23cm. All mode base stn	€899.00
Kenwood TS-850SAT, Auto ATU. Mint, Boxed	€799.00
Kenwood TS-870SAT. HF Rig DSP + Auto ATU	€1,099.00
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MFJ 925 Mighty Mite compact auto ATU. IC706 size. New	€225.00
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Yaesu FT-950 HF + 6m, DSP	€1,099.99
Yaesu FT-990AC with Auto ATU, Built-in PSU	€999.00
Alinco DJ 175 New 2m H/H with drop in charger Was	€149.00 Now ... €99.00
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